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TALKING WITH PATIENTS:

THE IMPORTANCE OF COMMUNICATION BETWEEN

PATIENTS AND PROVIDERS ON THE QUALITY OF HEALTH CARE

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This dissertation of Linda G. Greenberg, entitled Talking with Patients: The Importance of Communication Between Patients and Providers on the Quality of Health Care, directed and approved by the candidate's Committee, has been accepted by the Faculty of The Florence Heller Graduate School for Advanced Studies in Social Welfare and the Graduate Faculty of Brandeis University in partial fulfillment of the requirements for the Degree of

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This dissertation is dedicated to my parents,

Dr. Arthur and Evelyn Greenberg

In memory of:

Irving Kenneth Zola

Rhett James Morse

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[1] The statements contained in this report are solely those of the author and do not necessarily reflect the views or policies of the Health Care Financing Administration. The author assumes responsibility for the accuracy and completeness of the information contained in this dissertation.

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CHAPTER 1

INTRODUCTION

Recent attention has been drawn to patients' need for information about the quality of their health care. Defining quality of care from the patient's perspective often incorporates how well health care providers communicate with them about their health and illness. Often, patients want a comprehensive overview of their medical condition and treatment options, but they are often disappointed with the amount of information they receive from their providers. Patients are more likely to be dissatisfied with the quality of interpersonal communication than any other aspect of patient care (Hall and Dornan 1988; Cleary et al. 1988; Waitzkin 1985; Pascoe 1983). Anecdotal evidence and research findings suggest that patients' top complaints about their medical care are that their physicians generally do not listen carefully to their concerns, spend enough time with them, or provide clear explanations about their medical diagnosis or treatment options (Hanner and Witek 1995; *Consumer Reports* 1995; Roter and Hall 1992; Pendleton and Hasler 1983).

Seeking information and obtaining expert knowledge about one's illness and treatment may provide patients with reassurance about receiving proper medical attention and may help to reinforce their overall sense of self-confidence and trust in their medical providers. The adequacy of information that patients receive about their medical condition relates to their ability to make educated and well-informed decisions about their care.

Sharing knowledge and information with patients may boost patients' sense of empowerment over their health, which may indicate positive effects on health outcomes and patient satisfaction. However, patients who lack information about their illness or treatment options are likely to experience feelings of fear, uncertainty, and lack of control over their body and illness.

IMPROVING QUALITY THROUGH PATIENT-PROVIDER COMMUNICATION

Increased awareness of health care options has influenced patients' preferences and expectations of the quality of medical care. Studies have indicated that younger patients and members of the "baby-boom" generation tend to demand more information about their diagnosis, prognosis, and treatment options than elderly patients (Moloney and Paul 1991). This study utilizes patients' reports of suboptimal communication with their providers to explore the relationship between the hospital patients' sociodemographic characteristics and their perception of the quality of interpersonal aspects of care. In particular, patient perceptions are associated with such factors as age, education, insurance type, income, and health status. This dissertation uses a conceptual framework that focuses on patients' uncertainty about their medical condition and treatment that is directly related to the amount and type information they receive from their providers.

Seeking the opinion of patients is one way to assess the impact of changes in the health care delivery system and its effect on the quality of care (Meterko, Nelson, and Rubin 1990). This dissertation relied on data from the 1993 National Patient Survey, which reflects patients' reports of the quality of interpersonal aspects of care, detailing their accounts of what did or did not occur during their recent hospitalization. It is hypothesized that patients'

sociodemographic characteristics, specifically age and education, would likely be associated with patients' reports of communication problems. For purposes of this study, the communication of information between patients and providers covered a range of topics such as information about medical conditions, diagnoses, and prognoses; information about medications, diagnostic tests, surgical results; and information on self-care instructions on managing one's health and medical condition after hospital discharge (Gerteis et al. 1993).

Several investigators have shown that the quality of the interpersonal relationships between patients and providers is an essential component of good medical care (Daley 1993) and that interpersonal communication has a significant impact on the overall quality of care. The quality of patient-provider communication has been shown to have a significant impact on patient satisfaction (DiMatteo et al. 1980; Wooley et al. 1978; Roter 1983; Carter, Inui, Kukull, Haigh 1982; Hall, Roter, Rand 1981; Roter, Hall, and Katz 1988; Bertakis, Roter, and Putnam 1991). Additionally, evidence suggests that miscommunication or misunderstandings between patients and providers may lead to adverse patient outcomes (Inui and Carter 1985; Roter and Hall 1992; Greenfield, Kaplan, and Ware 1985; Greenfield, Kaplan, Ware, et al. 1988; Kaplan et al. 1989; Bartlett et al. 1984). Suboptimal communication has been associated with frustrating and costly medical care (Schwenk and Romano 1993; Ware and Snyder 1975; Roter 1977), "doctor shopping" (Kasteler et al. 1976; Wolinsky and Steiber 1982), and noncompliance with medical advice (Becker 1985; Eraker et al. 1984; Hayes-Bautista 1976). Because patients may misunderstand instructions concerning medication use or follow-up care after hospital discharge, they may inadvertently lengthen their recovery period and suffer poor health outcomes. These studies underscore the role of effective interpersonal communication between patients and providers and its relation

to patient outcomes. The review of the literature in Chapter 2 provides a more thorough discussion of the association between patient-provider communication and patient outcomes.

The vast evidence in the literature has led some researchers to conclude that suboptimal patient-provider communication may be "the rule rather than the exception" and that misunderstandings and miscommunication between patients and providers occur frequently (DiMatteo and Friedman 1982, p. 82). Moreover, several researchers have suggested that patients are likely to blame providers if they are dissatisfied with their health care outcomes (Redelmeier et al. 1993). Dissatisfaction has led some patients to pursue malpractice litigation (Schwenk and Romano 1992; Annandale 1989; Vaccarino 1977).

A key limitation of the literature on patient-provider communication is that most studies are largely descriptive and not theoretically-based (Inui and Carter 1985; Pendleton and Hasler 1983). Moreover, most of the empirical studies have relied on data from outpatient care departments. Few of these studies have focused on hospital patients' assessments of the quality of interpersonal aspects of care (Cleary et al. 1991; Meterko, Nelson, and Rubin 1990; Charles et al. 1994). This dissertation addresses shortcomings of the literature by drawing on medical sociology and human communications research. The theoretical framework of this study was informed by the concept of uncertainty. Its purpose is to understand better how hospital patients' experiences of illness relate to their acquisition of information about their diagnostic, therapeutic, or preventive care. This study suggests that a multidimensional definition of the quality of care, which acknowledges the importance of patients' perspectives of their care, particularly the role of interpersonal communication with providers, is particularly important.

This dissertation is comprised of six chapters. Chapter 2 details the literature on patient-provider communication and the influence of patients' personal characteristics on patient-provider communication. Chapter 3 sets forth the conceptual framework of patient-provider communication and the theoretical construct of uncertainty as it relates to suboptimal communication between patients and providers. Chapter 4 outlines the research design and methodology used in this study. Chapter 5 concentrates on the factors associated with patients' reports of communication problems and discusses findings from the multivariate analyses. Chapter 6 contains a discussion of the implications for policy and research of the present study.

CHAPTER 2

REVIEW OF THE LITERATURE

OVERVIEW

The quality of interpersonal communication between patients and providers has been the focus of extensive research during the last few decades (Roter and Hall 1992; Ray and Donohew 1990; Kreps 1988). Much of this research acknowledges the asymmetrical nature of interpersonal relationships between patients and providers, measured by differences in medical knowledge, cultural understandings of health and illness, expectations of care, social class backgrounds, and other factors. This chapter summarizes and synthesizes research regarding patient-provider communication from the social science literature, drawing on the fields of human communications and health services research. Empirical studies have been divided into two main content areas for purposes of the following review. The first part of this section highlights factors that influence the quality of patient-provider communication, specifically patients' sociodemographic characteristics. The second part of this section focuses on the relation between patient-provider communication and patients' ratings of the quality of care. The following section provides a brief review of the range of empirical studies in the literature concerning patient-provider communication.

PATIENT-PROVIDER COMMUNICATION

The quality of medical care is generally determined by the quality of technical aspects of care (e.g., the efficacy of medical procedures) and interpersonal aspects of care (e.g., patient-provider communication). The literature has contributed to a broader understanding of several factors that influence the nature of patient-provider relationships, despite the fact that many empirical studies are largely descriptive (Inui and Carter 1985; Pendleton and Hasler 1983; Wasserman and Inui 1983) and not theoretically based (Inui and Carter 1985; Linder-Pelz 1982; Roter, Hall, and Katz 1988).

The most common measures of interpersonal communication have focused on the *quantity* and *quality* of the information exchanged between patients and providers (Ley and Spelman 1967; Kaplan, Greenfield, and Ware 1989). Such measures provide a quantitative assessment of the effectiveness of patient-provider communication. A shortcoming of empirical studies on patient-provider communication, however, is that they fail to measure the content of information exchanged between patients and providers (Tuckett, Boulton, and Olson 1985). Nonetheless, several researchers have shown that communicative processes between patients and providers are associated with outcomes such as patient satisfaction and health status (Greenfield et al. 1988, 1985; Kaplan et al. 1985). For instance, Kaplan and colleagues have demonstrated in three separate randomized controlled trials that changes in patients' health status were clearly related to patients' participation in decisions about their medical care, measured by audiotaped recordings of communication between patients and their doctors (Greenfield et al. 1988, 1985; Kaplan et al. 1985).

Other investigators have suggested that the amount of information sharing between patients and providers is influenced by patients' characteristics (e.g., age, education, and

social class), providers' characteristics (e.g., social class, income, and perception of patients' desires for information), and the clinical environment or situational factors (e.g., practice volume, practice setting) (Waitzkin 1984, 1985; Pendleton and Bochner 1980; Stewart 1983).

FACTORS INFLUENCING THE QUALITY OF INTERPERSONAL COMMUNICATION

Researchers have documented that physicians' communicative behavior during the medical encounter is influenced by patients' sociodemographic factors such as age, sex, ethnicity, and appearance (Hooper, Comstock, Goodwin, and Goodwin 1982). Research on sociodemographic factors supports the contention that social class influences patient-provider communication and, moreover, affects the way in which patients evaluate the quality of their care (Dreifus 1977; Corea 1977; Ruzek 1978; Zola 1991).

Pendleton and Bochner (1980) observed that social class strongly influenced the number of explanations that patients received from their physicians. Waitzkin (1984, 1985) found that providers often communicate differently to different patients based on sociodemographic factors. Researchers have suggested that patients and physicians who share the same sociodemographic or social class characteristics are more likely to have better communication than individuals with different social class backgrounds (Greene, Adelman, et al.1989). Additionally, providers may determine the amount of information to give to patients based on judgments about patients' interest or ability to understand medical information.

Subtle stereotyping and direct personal bias may influence the quality of communication between patients and providers. Persons with low socioeconomic status are

likely to receive less information than other patients because physicians perceive them to be less interested in medical information (Boreham and Gibson 1978). Epstein and colleagues (1985) found that doctors and low socioeconomic status patients agreed less often on the symptoms, test results, and therapy related to patients' medical condition than patients of higher socioeconomic status. Another study found that patients of low socioeconomic status received 50 percent fewer health-related statements from their physicians than patients of higher socioeconomic status (Bain 1977). In contrast, some studies indicate that more-educated patients tend to ask more questions and consequently receive more information from providers than patients who are less well educated (Street 1991; Waitzkin 1985; Pendleton and Bochner 1980).

Patients' Sociodemographic Characteristics

Researchers have demonstrated that sociodemographic characteristics of both patients and providers help to explain the nature and dynamic of interpersonal communication during medical encounters (Hall and Dornan 1988; Waitzkin 1985; Epstein, Taylor, and Seage 1985; Stewart 1983; Pendleton and Bochner 1980). Patients' education and age have been shown to be significant indicators of patients' ratings of the quality of care. The following section highlights themes within the literature that underscore the importance of patients' education and age as influencing factors on the quality of patient-provider communication.

Education Level

Researchers often use patients' educational attainment as a measure of socioeconomic status because it relates to employment opportunities and income. For instance, data from

the 1990 Survey of Income and Program Participation indicates that average monthly earnings increases by educational level; that is, college graduates typically earn four times more income than high school graduates. Although the present study does not incorporate a socioeconomic status measure, it sought to understand how patients' educational attainment, as a proxy for socioeconomic status, and patients' age were associated with the quality of patient-provider communication.

Researchers have indicated that patients' educational attainment is a significant predictor of the amount and type of information that patients receive from their providers (Waitzkin 1985; Stewart 1983; Wasserman and Inui 1983). The amount of information exchanged between patients and physicians has been associated with patients' involvement in asking questions and seeking information as well as physicians' assumptions about patients' desire for information (Pendleton and Bochner 1980). Moreover, patients' educational attainment may be associated with their perceptions of the adequacy of information and willingness to report problems with the quality of their care. For instance, it may be speculated that higher expectations among persons with higher socioeconomic status may relate to lower satisfaction ratings. Alternatively, patients with lower socioeconomic status may have lower expectations of their care, thus demonstrating higher satisfaction ratings of their care. Moreover, empirical evidence suggests that persons with low socioeconomic status are likely to have less effective communication with their providers than patients with higher socioeconomic status (Epstein, Taylor, and Seage 1985). One possible explanation is that patients with less education may receive less information from their providers. Korsch and colleagues (1968) acknowledged the danger of unequal access to information. They

suggest a "vicious cycle in which [those] most in need of education [e.g., less educated patients] .. are apt to receive the least [information]" (Korsch et al. 1968, p. 868).

The literature demonstrates an observable and measurable link between education and socioeconomic status. Pendleton and Bochner (1980) demonstrated that patients' social class, measured by education and income, were strong indicators of the amount of information that providers gave to them. Yet, patients' desires for medical information have been found to be independent of their socioeconomic status (Waitzkin and Waterman 1974). Nonetheless, there is strong evidence that better-educated patients tend to engage in longer dialogues with physicians and receive more explanations about their medical condition and treatment than less-educated patients (Roter and Hall 1992; Street 1992; Brody 1980; Waitzkin 1985; Strull, Lo, and Charles, 1984; Stewart 1983). Thus, it is likely that more time spent with providers may be associated with more shared information and a higher comprehension of one's medical diagnosis, prognosis, and treatment options. Kaplan and colleagues (1996) found that length of office visit was significantly associated with patients' participation in treatment decisions.

Researchers have suggested that advanced formal education may encourage people to adopt a particular style of discourse that involves a critical analysis of information. Empirical evidence suggests that better-educated patients prefer more involvement in decision-making about their care than less-educated patients (Strull, Lo, and Charles 1984; Cassileth, Zupkis, Sutton-Smith, et al. 1980). However, patients' involvement in their care may relate to physicians' communicative style, which may include ways to encourage patients to take active involvement in their care. Kaplan and colleagues (1996) found that patients with less than high school education were likely to participate less often in treatment

decisions than better-educated patients. Waitzkin (1985) suggested that similarities and differences in social class background may influence providers' information sharing and communicative styles.

These studies suggest that less-educated patients may have less knowledge about their medical condition or treatment options than better-educated persons. Moreover, while the mass media publishes a vast array of news articles on health promotion, disease pathology, and treatment options, there appears to be an unequal distribution of information and knowledge of health and illness issues among persons with different amounts of education (Waitzkin and Stoeckle 1972). It is evident that those of higher socioeconomic status have an advantage in accessing a broad array of information and medical knowledge over persons of lower socioeconomic status (Lupton 1994). Barriers to information access include factors such as written material beyond the reading level of persons with low levels of education; information written in a language the patient is unable to speak; inability to afford the cost of magazines and books that contain health information; and people being unable to evaluate the quality of care they receive or believing that they are not in a position of authority to improve it (Nechas and Foley 1994).

Furthermore, patients' understanding of and compliance with medical instructions may be influenced by their education level. Persons with low education levels may be more likely to misinterpret meanings and the context of medical instructions compared to patients with more formal education because they lack the necessary skills to analyze the content of messages and ask critical questions to clarify unclear issues (Doak, Doak, and Root 1996). Patients with low education levels may not ask questions about their medical care because of personal embarrassment stemming from not understanding physicians' use of technical

medical language or jargon. Stoeckle (1987) argued that less-educated patients may be reluctant to ask questions to clarify unfamiliar medical terms and challenge the medical advice of providers. One possible explanation is that less-educated patients may feel more inhibited by their lack of formal knowledge and may not feel they know the proper questions to ask. Additionally, it has been suggested that persons with less education are likely to provide more deference to persons with advanced education, based on respect or intimidation of the authority associated with more formal knowledge and expertise (Haug 1975).

Moreover, providers' use of highly technical terms may discourage patients from asking questions (Ventres and Gordon 1990; Korsch, Gozzi, and Francis 1968). For instance, less-educated patients may believe that asking questions reinforces the fact that they may not understand specific information, thus, highlighting their ignorance of medical knowledge. The shame associated with admitting ignorance of health issues and not understanding medical jargon may intimidate some patients, irrespective of socioeconomic status, and inhibit them from asking providers to clarify their use of language and medical explanations (Greenfield et al. 1985; Kaplan et al. 1996). It is possible that less-educated patients may have more problems articulating questions because they may believe that they do not know the "right questions" to ask. Some patients may not ask questions or discuss their concerns because they believe their providers are "too busy" to speak with them. Finally, less-educated patients may try to "save face" by maintaining their sense of self-sufficiency and, at the same time, maintain confidence in their providers that they are acting "in the best interest" of the patient.

The knowledge gap among persons with low education levels has been characterized as an "information ghetto" (Freimuth 1990, p. 176). Freimuth argues that the system in

which less-educated persons seek and gather information is a more closed system than that available to persons with more formal education, who are likely to have access to more resources, medical knowledge, and useful information. One of the possible consequences of poorly-informed patients may be unneccessary hospital readmission, dealing with medical complications that may have been prevented with more comprehensive patient education.

Age

Age has been associated with the quality of interpersonal interactions between patients and providers. The literature indicates differences in the way that patients of different ages view the quality of medical information and rate satisfaction with their care. Generally, studies have demonstrated that older patients are more likely to report fewer problems with the communication of information than younger patients (Charles et al. 1994; Cleary et al. 1991; Cleary and McNeil 1988). Researchers have found that elderly patients tend to engage less often in conversational behaviors that are associated with better health care outcomes; such conversational behaviors include asking questions, interrupting, asserting opinions, and discussing their problems (Roter 1984). One explanation for these findings is that elderly patients may be less comfortable asking questions than younger patients (Comstock et al. 1982). One study found that elderly hospital patients were more satisfied than younger patients with the quality of medical information; yet, they were more fearful of complaining and more likely to express gratitude about their care (Breemhaar, Visser, and Kleijnen 1990).

In a study of 2,667 patients in Dutch hospitals, patients' age was determined to be a moderate predictor of patients' perceptions of the quality of medical information (Breemhaar,

Visser, Kleijnen 1990). This study reported significant differences between age groups. Elderly patients (61-80 years of age) were more likely than younger patients (20-50 years of age) to ask fewer questions and discuss their problems less often with providers. Younger patients reported more problems with the clarity and adequacy of information than elderly patients, despite the fact that each group received nearly the same amount of information. These findings with respect to age are consistent with Cassileth and colleagues (1980) who found that younger patients prefer more information about their medical condition and treatment options and, thus, seek more active participation in their medical treatment than older patients. Thus, this study and others show that younger and older patients differ widely in information-seeking behaviors and their perceptions of the quality of medical information.

However, Kaplan and colleagues (1996) found that younger and older patients are perhaps more similar than investigators have indicated in previous studies. Kaplan and colleagues found that two groups of patients -- the elderly (75 years and older) and young (under 30 years of age) -- were encouraged less often to participate in treatment decisions than middle-aged patients. This study indicates that one factor associated with whether or not patients participate in medical decision-making is the tenure of the patient-provider relationship. Patients who had a secure relationship with their physician for at least five years or more were likely to participate more actively in treatment decisions. Kaplan and colleagues also found that length of office visit was a major indicator of patents' participation in treatment decisions. Thus, patients who believe that they are being rushed in the doctor's office, particularly elderly and younger patients, may be at risk for less active involvement and participation in their treatment decisions.

In a meta-analysis of patient satisfaction studies, Hall and Dornan (1988) found that patients of older age with less education tend to be more satisfied with the quality of their medical care than patients of younger age with more education. There are several possible explanations for this finding. First, older persons may be more satisfied with the quality of their life in general, which may be reflected in ratings of the quality of their medical care. Second, higher satisfaction ratings among older patients may be associated with long-term stable relationships with their providers.

An important factor associated with age is that it is likely to be positively correlated with more health problems and longer professional relationships with providers. "Aging may be said to be both independent and codependent, in the sense that it certainly contributes to disease and may in turn be accelerated by it" (Nuland 1993, p. 71). Thus, it may be speculated that the elderly's need for medical treatment may relate to increased dependency on a range of medical services, which may instill gratitude among some patients. It is this sense of gratitude for medical care that may be associated with patients' favorable ratings of their care. That is, patients who are vulnerable may not want to criticize providers who treat their medical problems and help them to recover from illness or disabling medical problems. Finally, older patients may express more satisfaction with their care because they may be more willing to report that their positive experiences with the health care system generally outweigh relatively minor negative experiences. Finally, ratings of care may be confounded with patients' experiences of illness and their personal values, needs, and expectations of care.

Lastly, differences in patients' perceptions of the quality of medical information and satisfaction with their care may relate to the effect of age cohort and their unique place in

history. Young adults (under 30 years of age), middle-age adults, and elderly persons are likely to have different perspectives of and interactions with the health care system in general, and the patient-provider relationship, in particular. For instance, elderly patients may find comfort in following "the doctor's orders" because they may be accustomed to paternalism in the relationship. However, younger patients may not desire to adopt this same type of patient-provider relationship. Members of the baby-boom generation, born between 1946 and 1965, are likely to be strongly influenced by the consumer and self-help movements of the last two decades. Thus, younger persons are more likely to challenge authority, whether parental, governmental, or medical, than their elderly counterparts (Haug and Lavin 1983). Such social movements also may have encouraged younger patients to be well informed about their health or illness and assume more active involvement in decisions about their care. Also, younger and middle-aged patients are likely to be better-educated consumers and, perhaps, more aggressive than their older counterparts (Silverstone 1996). Thus, such influences may relate to younger patients' self-confidence and question-asking behavior during office visits.

Health Status

Many studies have demonstrated that health status is positively associated with patient satisfaction, incorporating patients' assessments of interpersonal communication with their providers. Researchers have reported that sicker patients tend to be less satisfied with the quality of care than healthier patients (Cleary et al. 1991; Cleary and McNeil 1988; Pascoe 1983). One possible explanation is that patients' experiences with physical pain or mental distress may influence judgments of the quality of care. However, few studies have

examined the causal relationship between health and patient satisfaction. One study examining the older patient population of a health maintenance organization demonstrated "strong evidence that health status is a causal determinant of satisfaction with medical care" (Hall, Milburn, and Epstein 1993, p. 92). Hall and colleagues used self-perceived health status as predictive of later satisfaction with care, emphasizing "the psychological experience of ill health--the pain, inconvenience, frustration, and/or bitterness attendant on one's physical conditions--results in a lowered opinion of one's medical care" (p. 92).

The 1989 National Hospital Survey found that health status strongly predicted the likelihood of whether patients reported problems with interpersonal aspects of care (Cleary et al. 1991; Charles et al. 1994). Patients who rated their health status as fair or poor had reported more problems with the quality of hospital services. Cleary and colleagues showed that the total number of problems patients report is a good predictor of patient satisfaction (e.g. few problems -- high satisfaction; many problems -- low satisfaction). Eleven percent of patients in fair or poor health reported receiving no understandable answers to important questions. Nearly 1 in 3 patients in the sample received little or no information on potential side effects of medications. Among patients in fair or poor health, 14 percent were not satisfied with involvement in decisions about their care (Gerteis et al. 1994).

Attitudes and Expectations

Patients and providers have different attitudes and expectations of their respective roles in the medical encounter (Kasl 1975). Inevitable conflicts may arise when patients and providers do not share the same expectations of medical care. Freidson (1970) argued that such tensions are inherent in medical encounters, in which both patients and providers are

likely to engage in negotiation activities and vie for dominance in the relationship. Differences in expectations of care may contribute to misunderstanding or miscommunication and may affect the quality of interpersonal relationships between patients and providers (Beisecker 1990; Street and Wiemann 1988; Korsch, Gozzi, and Francis 1968). The gap between personal expectations of care and actual provision of care may lead to patient dissatisfaction and distrust of providers (Hilfiker 1985). Moreover, Zola (1972) suggested that unfulfilled expectations are likely to influence patients' decisions to end therapeutic relationships and to switch providers.

Providers may overlook the importance of assessing patients' own expectations of the medical encounter and experiences with medical uncertainty and its impact on their physical and psychological well-being. Moreover, acknowledging patients' expectations of care may be critical in understanding particular health behaviors that patients adopt in relation to coping with their medical condition or treatment (Rodin 1978). For instance, patient attitudes and expectations of care are often based on prior experience and lay knowledge, as well as providers' verbal and non-verbal communication styles (Rodin 1982).

Respecting patients' perceptions of their illness or quality of care may have an effect on patient outcomes. For instance, Brody and colleagues (1989) found that patients who expressed their opinion during the medical encounter were more likely to be satisfied with the quality of their care. Numerous researchers have highlighted the importance of valuing the perceptions of patients. Patients' perceptions about the information that they receive are as important as the actual information that they receive.

In summary, the focus of patient-provider communication studies has provided a solid understanding of both patients' and physicians' behaviors and attitudes (Roter and Hall 1992;

Hall, Roter, and Rand 1981; Hall, Roter, and Katz 1988). A general theme among most empirical studies is that patients want to be fully informed about their medical condition and treatment plans (Cassileth, Zupkis, et al. 1980; Kaplan, Greenfield, and Ware 1989; Blanchard et al. 1988; Strull, Lo, and Charles 1984; Ende, Kazis, and Ash 1989). However, many providers have been found to underestimate patients' preferences for information and misperceive their information needs (Waitzkin 1984). Such findings have led researchers to suggest that patient-centered communication styles -- including information sharing and counseling -- would have a favorable impact on patients' ratings of quality compared to physician-centered communication styles, which limit patients' information-seeking behavior and foster providers' ability to dominate the amount and type of questions asked during the office visit (Roter, Hall, and Katz 1988; West 1983).

THE RELATION BETWEEN PATIENT-PROVIDER COMMUNICATION AND PATIENTS' RATINGS OF THE QUALITY OF CARE

The literature provides strong evidence of the link between the quality of patient-provider communication and patients' ratings of the quality of care (Roter and Hall 1992, 1989, 1987; Hall, Roter, and Katz 1988; Comstock, Hooper, Goodwin, and Goodwin 1982; Stiles, Putnam, Wolf, and James 1979). Patient satisfaction has been positively related to patients' perceptions of their providers' interpersonal communication style. For example, evidence suggests that patients who report significant problems with interpersonal communication are likely to be less satisfied with the overall quality of their care. Thus, it is generally assumed that patients' ratings of their care incorporate their assessments of the effectiveness of interpersonal communication, including patients' understanding of medical

explanations, physicians' interpersonal communicative behavior, and the exchange of emotional concerns (e.g., fears, anxiety, worry) (Buller and Street 1992).

Early studies have demonstrated patients' long-standing dissatisfaction with the quality of interpersonal communication with providers in hospital settings (Ley and Spelman 1967; Skipper and Leonard 1965). In an examination of 800 patient visits, using tape recordings of the medical interview and follow-up visits, Korsch and colleagues (1968) found several factors associated with communication problems that were related to low ratings of patient satisfaction. These factors included physicians' use of medical jargon, lack of understandable explanations of medical diagnoses, and perceived lack of friendliness or compassion, among others. Providers' sense of warmth and friendliness were positively related to patient satisfaction (Korsch et al. 1968); these researchers found that less than five percent of providers' communication was considered friendly or personal. More recent studies have confirmed these findings by demonstrating a significant association between patient satisfaction and physicians' expressiveness and interpersonal communication skills (Bertakis et al. 1991; Street and Wiemann 1987).

Other factors that influence patient satisfaction are related to providers' communicative behavior involving medical jargon and highly technical medical terms. Additionally, researchers have indicated that patient dissatisfaction is associated with nondisclosure of information or information that is considered either inadequate, conflicting, or confusing (Waitzkin and Waterman 1974, p. 84). Lack of full information may frustrate consumers and negatively impact the caring nature of the patient-provider relationship. These studies provide evidence that language has the power to shape experiences and social reality (Mintz 1992). Providers' use of medical jargon may inadvertently alienate patients

from the interpersonal nature of the therapeutic relationship. Patients who are unfamiliar with specific medical terminology may hesitate to ask questions to clarify unclear or confusing issues. In particular, patients with low education levels may be considered most vulnerable because they often have less understanding of medical jargon and technical medical language than patients with more formal education, who may be more familiar with such terms.

A paradoxical finding in the literature is that most patients believe that the quality of their care is better than that of others (Hall and Dornan 1988; Hays and Ware 1986). For instance, patients state that they are generally satisfied with their own quality of care, but are less satisfied with the quality of care of the general population. Hays and Ware (1986) attribute this phenomenon to "social desirability," in which patients tend to report satisfaction with the quality of their care despite specific problems. One possible explanation is that patients want to maintain trust and confidence in the competency of their providers, as well as their sense of self-worth, by reassuring themselves that they are receiving good quality medical care (Roter and Hall 1992).

SUMMARY AND CONCLUSION

There is substantial evidence that patients' sociodemographic characteristics have an effect on their qualitative perceptions of the quality of their care. Generally, empirical research has explored three broad areas of investigation.

1. *How many* patients are likely to report communication problems?
2. *What* are the characteristics of patients who report communication problems?
3. *Why* do patients report communication problems?

The major shortcoming of these studies, however, is that they lack a theoretically-based understanding of the relationship between patients and providers (Inui and Carter 1985; Linder-Pelz 1982; Roter, Hall, and Katz 1988). Moreover, many of these studies use data from outpatient care departments. Few studies have examined hospital patients' perceptions of the quality of interpersonal aspects of care (Cleary et al. 1991; Meterko et al. 1990).

This dissertation incorporated a multivariate research design to analyze the relation between patients' sociodemographic characteristics and their reports of communication problems. The present study sought to determine whether the nature of communication between patients and providers would be influenced by patients' age and educational attainment and whether such variables interacted with other personal characteristics to affect patients' reports of communication problems. Moreover, this study was designed to investigate the types of communication problems that were important concerns among hospital patients and to determine whether specific concerns differed among younger and older patients. Finally, the theoretical framework sets forth a model that acknowledges the importance of several factors related to patients' reports of suboptimal communication with their providers; these factors include prior experience with health care, expectations, information-seeking behavior, and the amount and type of information patients receive from their providers. The conceptual model of the present study is discussed in Chapter 3.

CHAPTER 3

CONCEPTUAL FRAMEWORK OF PATIENT-PROVIDER COMMUNICATION

INTRODUCTION

This chapter introduces the concept of uncertainty as it applies to interpersonal communication between patients and providers in the hospital setting. Sociological theories have traditionally described the uncertainty concept from the medical standpoint and have shown how it affects physicians' judgments regarding patient care (Fox 1957, 1980; Mishel 1981, 1984). Such theories have been applied infrequently to the quality of patient-provider communication, from patients' perspectives. The present research relies on the concept of uncertainty in relation to patients' experiences of illness, thus providing the theoretical framework to test the hypothesis that patients' sociodemographic characteristics influence their judgments of the quality of interpersonal communication with their providers. Specifically, the present research focuses on patients' experiences with uncertainty related to problems with the acquisition of information about their medical condition or treatment.

This chapter is divided into three sections. The first section describes the uncertainty concept as it applies to patients' experiences of illness. The second section applies the uncertainty concept to patient-provider communication issues, examining the nature and

dynamics of interpersonal communication and patients' perceptions of the communication of information. The last section discusses the impact of uncertainty on patient outcomes.

UNCERTAINTY AFFECTS PATIENTS' ILLNESS EXPERIENCES

Admission to a hospital for either medical or surgical services is generally a stressful event for patients, often causing anxiety and concern. Patients may be unaccustomed to the hospital environment and must adapt to an unfamiliar schedule of events involving laboratory tests, therapy sessions, and medical or surgical procedures. In the hospital, patients must adjust to loss of independence and privacy and must succumb to a schedule of activities that is beyond their immediate control. Being a hospital patient may be a dehumanizing and alienating experience for many. After all, patients often have little say about their personal privacy and schedules for meals, personal hygiene, medical procedures or treatment, and consultations with their physicians. Additionally, patients may have excessive worry about medical procedures, which providers may view as merely routine or standard (Cegala et al. 1995). Moreover, hospitalization may be trauma- or anxiety-provoking for many patients because they may be uncertain about their medical diagnosis, prognosis, or treatment. Most patients want to be well informed about both the risks and benefits of the medical treatment. However, patients often become dependent on physicians and nurses for information about their illness. The hospital environment, itself, may hinder patients' ability to obtain complete information from their providers due to environmental distractions (e.g. lack of privacy, brief consultations with patients). The following excerpt describes the hospital environment and characterizes patients' struggles to obtain information about their medical condition.

> "Hospitals are rarely places which encourage persistent questions from patients. They are busy places; people are busy; and things are always serious. Questions interrupt nurses and physicians in their daily round of activities, especially (it is said) in their care of other patients. [Patients'] questions may thus appear selfish, and patients do not want to appear presumptuous, insulting or selfish... A premium is placed, after all, on the 'good patient,' who is compliant, cooperative, quiet, etc." (Zaner 1983, p. 89)

Most patients are uncomfortable with uncertainty related to their health and well-being. One way that practitioners and researchers alike have recommended to deal with uncertainty is to improve efforts to disseminate information about health and medical issues to patients. Providing patients with complete information may alleviate their fears and perhaps unrealistic worries about post-hospital discharge and follow-up care. Moreover, information may prepare patients emotionally to deal with the discomfort, pain, and rehabilitation therapy after medical or surgical procedures in the post-hospital period. Patients who are uncertain about their illness or treatment options are, by definition, more vulnerable and may become more dependent on the advice of others who are more knowledgeable about their medical condition and treatment (Speedling and Rose 1985). This type of dependency, however, may deny patients a certain measure of personal responsibility for their medical treatment and recovery from illness and reinforce providers' dominance in the therapeutic relationship (Roter 1977). As described in the following sections, uncertainty may have different effects on patients' experience with illness, depending on socio-demograhic characteristics, attitudes and expectations, or prior experiences with illness.

Definition of Uncertainty

Uncertainty challenges the human need to make sense of situations and to seek control of the unknown. Sociologists suggest that uncertainty is pervasive in everyday life,

particularly in the practice of medicine (Fox 1980). Definitions of uncertainty generally describe an individual's psychological state in which there is lack of clarity about a situation. Investigators have postulated that the degree of uncertainty experienced may modulate along a "continuum of uncertainty (unpredictability) to certainty (predictability)" (Levine and Wiener 1989, p. 4). According to this theory of uncertainty, the amount of information shared with patients influences the degree of uncertainty experienced (e.g., more communication--less uncertainty, less communication--more uncertainty) (Roloff and Miller 1987). This theory complements empirical research that suggests patients desire information about their medical condition and treatment, not only in order to be informed about their medical care but also to be reassured that providers care enough to share information with them, whether the information is good or bad.

This research postulates that patients' experiences of uncertainty are directly related to their reports of problems with the acquisition of information concerning their diagnostic, therapeutic, or preventive care. Patients may consider information or explanations to be insufficient, conflicting, or not understandable. To reduce patients' uncertainty about their illness, it is crucial to understand the nature and dynamics of patient-provider communication. Moreover, patients are likely to view medicine as a precise and predictable approach to curing ills until they experience serious illness or chronic medical problems. "The further one moves into the medical system as a patient, the clearer it becomes that medicine is as much an art as it is a science" (Cohodes 1995, p. 204). Physicians, too, are likely to admit and be frustrated by the limitations in medicine to cure specific complex and chronic illnesses such as cancer and heart disease. Because patients and physicians are likely to have different understandings and expectations of medicine, they are likely to cope

differently with uncertainty in relation to illness and medical treatment. The following sections focus on how uncertainty influences the nature and dynamics of patient-provider communication.

THE NATURE AND DYNAMICS OF PATIENT-PROVIDER COMMUNICATION

The nature of interpersonal communication between patients and providers reflects an asymmetrical relationship. Eliot Friedson (1970) suggested that "professional dominance" is the subtle way in which physicians control the nature of the interpersonal communication and decision making within the therapeutic relationship. Professional dominance is exhibited when physicians attempt to control the flow of information to patients or interrupt, silence and ignore patients' concerns about their medical condition (Waitzkin and Stoeckle 1972), or propose only selected alternatives for treatment (Light 1979). As "gatekeepers" to medical services and medical knowledge, physicians assume a dominant position and often influence the nature and dynamics of the relationship, which may either empower patients or reinforce their vulnerability.

Physicians' communication styles and use of social power in the therapeutic relationship are closely related (Brody 1992; Waitzkin and Stoeckle 1972). The control of information often functions to reinforce providers' professional dominance. Physicians may inadvertently undermine patients' autonomy by withholding information and controlling decisions about their medical care (Brody 1992). Additionally, physicians may provide false hope for patients by expressing certainty of resolving and effecting a cure for their medical problems (Lown 1996). Thus, the thoroughness of information provided by physicians to

patients often determines patients' understanding of their illness and expectations of their care.

Providers must deal with the onus of acknowledging medical uncertainty not only to themselves but to their patients (Katz 1984). Divulging medical uncertainty to patients may be a difficult task for many providers because medical uncertainty may cause some providers to question their capability as healers and ability to treat illness and disease (Katz 1984). Yet, Brody (1992) suggested specific guidelines for providers to share social power with patients in the therapeutic relationship. For example, "The physician should try whenever practicable to share her Aesculapian power by informing the patient, in so far as the patient wishes, about the nature of the disease and the treatment" (Brody 1992, p. 65). This task is more difficult when providers may not be absolutely sure how much uncertainty is involved in some medical decisions because of gaps in the literature of clinical medicine.

As emphasized above, providers are in a special authoritative position to control the nature of the therapeutic relationship by directly or indirectly controlling the amount of information shared with patients. Some providers may overstate certainty to reassure patients of the effectiveness of medical treatment and the likelihood of good health care outcomes. However, other providers may emphasize uncertainty and, consequently, instill a patient with anxiety or worry about their medical condition and treatment. It is possible that providers may be willing to share more complete information with patients whose medical problems are clearly defined and less likely to share full information with patients whose medical conditions involve a higher degree of medical uncertainty. Nonetheless, the danger of shielding patients from medical uncertainty is that it may encourage some patients to believe

that they will not be subject to medical fallibility or human error (Gorovitz and MacIntyre 1976).

Providers may rely on subtle or direct stereotyping to either over- or under-estimate patients' ability to understand medical information, based on social class background or educational attainment. As discussed in Chapter 2, researchers have suggested that some providers may share a significant amount of information with patients who have more advanced formal education and appear to have a higher level of interest in their medical care. In contrast, other providers may rationalize that withholding information is justified because they believe that some patients have no interest in medical information nor would they likely understand sophisticated medical issues. Friedson (1970) traced this point of view back to the historic paternalistic attitudes of the Hippocratic Corpus: "the client is too ignorant to be able to comprehend what information he gets and is, in any case, too upset at being ill to be able to use the information he does get in a manner that is rational and responsible" (p.142). Similarly, Talcott Parsons (1951) defended the traditional authoritarian relationship by arguing that it was functional and maintained social order. Parsons believed that the role of physicians assumed traits of dominance and authority, whereas patients assumed roles that were passive and dependent.

Friedson (1970) argues that the "competence gap" between patients and providers reinforces the asymmetrical balance of power in the therapeutic relationship and patients' dependency on medical authority. Yet, the competence gap may intensify patients' level of uncertainty about their medical condition and treatment options (Waitzkin and Stoeckle 1972). Even when patients demand all available information about their medical condition, making decisions about their medical treatment may be a different matter altogether. Even

though patients may be fully equipped with comprehensive information about their medical condition and treatment, they may desire either more or less involvement in decisions about their medical care, depending on personal preferences. While some patients may seek to take personal responsibility for their medical care, others may depend solely on providers to make decisions about their care.

THE UNCERTAINTY CONCEPT APPLIED TO PATIENT-PROVIDER COMMUNICATION

Reviews of the literature suggest a lack of theoretically-based research on patients' assessments of interpersonal communication with providers (Waitzkin and Stoeckle 1972; Roter and Hall 1992). Primarily, researchers have examined the concept of uncertainty from the physician's standpoint (Fox 1957, 1980; Katz 1984; Light 1979). Such analyses have focused on the pervasiveness of uncertainty in medicine and physicians' routine encounters with problems of medical uncertainty.

In a classic contribution to the sociological literature, Renee Fox (1957) examined sources of uncertainty, which caused stress among medical students during their medical education and physicians during everyday practice settings. Fox showed that problems of uncertainty were mainly due to gaps in knowledge and the limits of medical technology. She identified three basic types of uncertainty:

> "The first results from incomplete or imperfect mastery of available knowledge. No one can have at his command all skills and all knowledge of the lore of medicine. The second depends upon limitations in current medical knowledge. There are innumerable questions to which no physician, however well trained, can as yet provide answers. A third source of uncertainty derives from the first two. This consists of difficulty in distinguishing between personal ignorance or ineptitude and the limitations of present medical knowledge" (Fox 1957, pp. 208-209).

Fox emphasized that medical training prepares students to acknowledge the uncertainty dimension in medicine and to learn ways to tolerate and deal with it. Katz (1984) cautions that acknowledging the uncertainty dimension in medicine, as defined by Fox (1957), may lead some physicians to overemphasize certainty or minimize uncertainty to patients, which may affect the quality of interpersonal relationships between patients and providers. However, it is physicians' "bedside manner" that often determines the quality of the patient-provider relationship and one of the ways that patients evaluate their physician's skill and competence. A key element of physicians' bedside manner is to reassure patients that all is being done that can be done to treat their medical problem and to acknowledge the limitations of medicine (Jones, Kreps, and Phillips 1995). However, physicians may fail to acknowledge medical uncertainty to patients for a variety of reasons including concerns about reducing patients' stress, personal interest in maintaining a dominant role in the relationship and control over medical decisions, and compassion in the face of patient discomfort and distress. Each provider, however, is unique in his or her approach to medicine and makes personal judgments about the amount of information to share with his or her patients, based on many factors, including medical uncertainty about the patient's medical condition or treatment options.

People depend on knowledge and information to reduce feelings of uncertainty and ambiguity. Greater understanding of the purpose of clinical procedures and medical tests may help patients to have realistic or reasonable expectations of their medical care. An important sociological proposition addresses the reactions of people when their expectations are either met, unfulfilled, or exceeded. According to George Homans (1974), a social

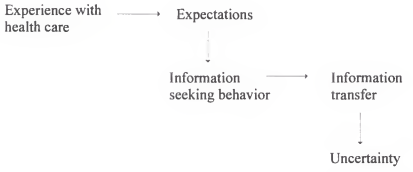
exchange theorist, people will attempt to reduce uncertainty by engaging in actions or behaviors that elicit rewards and avoid actions or behaviors that invoke punishment.

Homans (1974) devised universal principles that concern human behavior and social activity. He stated that "when a person's action does not receive the reward he expected, or receives punishment he did not expect, he will be angry." Conversely, "when a person's actions receive the reward he expected, especially a greater reward then he expected, or does not receive punishment he expected, he will be pleased" (Wallace and Wolf 1991, p. 188). This proposition relates to variations in patients' assessments of the quality of care. When patients' experiences fall short of their expectations -- recognizing also that some patients do not know what to expect -- or when patients perceive suboptimal care, they are likely to assume a more active role in their care and challenge medical authority about their care (Ende et al. 1989; Roter and Hall 1992; Haug and Lavin 1983).

The present study focuses on the following conceptual model of patients' experiences with uncertainty, presented in Figure 3.1. As seen below, patients' prior experiences with health care (e.g., previous hospitalizations and other encounters with the health care system) influence personal expectations of the quality of their care. For instance, negative prior experiences with care may be associated with lower expectations of the quality of their care. In contrast, positive experiences with care may relate to higher expectations of their care. Thus, expectations may influence patients' information-seeking behavior (e.g., the amount and type of questions that patients asked and whether patients asserted their personal needs). Thus, patients' information-seeking behavior has a direct relationship to the transfer of information between patients and their providers. As discussed in Chapter 2, patients who ask more questions during office visits tend to receive more information about their illness

and treatment. The final phase of the conceptual model relates the transfer of information between patients and providers to patients' sense of uncertainty about their medical condition. For instance, more information shared between patients and providers is likely to result in less uncertainty; less information exchanged may result in more uncertainty. This conceptual model is consistent with the theory of uncertainty, proposed by Roloff and Miller (1987).

Figure 3.1
Conceptual Model of Patients' Uncertainty



As illustrated in the above model, patients' perceptions of the quality of care may be influenced by past experiences with illness, treatment modalities, and personal encounters with the health care system. For instance, negative experiences with illness, which may have included prolonged healing, may subsequently contribute to patients' apprehension of medical care. Patients' personal experiences may influence their social behavior and involvement in medical decisions. Thus, patients' reactions to medical uncertainty are likely

to be associated with prior experience with illness, as well as personal relationships with their providers.

Additionally, uncertainty is likely to relate to patients' prior experiences with illness and responses to medical encounters (Light 1979). For instance, older patients may have broader exposure to the health care system than considerably younger patients, by virtue of their age. Through experience, older patients may have developed the skill of navigating the health care system, such as getting acquainted with certain physicians and understanding how to obtain referrals for specialty care. Thus, it is possible that older patients may have less uncertainty about their care because they may have received more information about their illness or chronic disease during a longer span of time than younger patients.

Whether or not patients experience uncertainty about their illness or medical treatment may relate to personal values, expectations, and preferences for care. Human development theories broaden our understanding of the possible reasons that patients react differently to information uncertainty. Theorists have suggested that the natural process of aging has an effect on individuals' definitions of their identity and self-image, which may influence reactions to uncertainty and perceptions of communication with their providers.

In a classic contribution to the human development literature, Erik Erikson's "Eight Stages of Man" (1950, 1960) provided a useful framework to understand personality and developmental theories of aging applied to the lifespan. Based on Erikson's theories, the present research postulates that younger patients, by virtue of their age, are likely to perceive events differently than older patients because they have different expectations and experiences with the health care system. Also, young adults may have more distinct needs than older adults that relate to self-image and ego development (e.g, need for reassurance and

guidance) that influence their perceptions of interpersonal communication with their providers. Moreover, it is believed that older patients may be more likely to have less uncertainty about their medical condition because they have more stable and long-term relationships with their providers than younger patients. Longer tenured relationships may reduce patients' sense of uncertainty about their medical condition or treatment plans (Berger and Calabrese 1975).

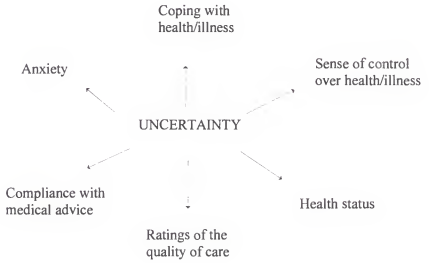
Other theorists have proposed that adult development should be understood through the framework of the *life structure*, which may be characterized by the type of significant relationships built with others throughout the years (Levinson 1986). For it is these relationships that have a profound effect on adult development and help to shape personal experiences, providing an opportunity to participate with others and in society. Such theories lend support to the notion that it is the passage of time and the marking of significant events that occur during the life cycle (e.g., changes in health or social networks) that have an effect on personality and behavior (Busse 1982). Thus, it may be hypothesized that older patients, by virtue of their age and having more varied life experiences than younger patients, may have more tolerance for information anxiety and uncertainty.

THE EFFECT OF UNCERTAINTY ON PATIENT OUTCOMES

Figure 3.2 illustrates a diagram based on the existing literature of the effect of uncertainty on patient outcomes. The model, adapted from Nanci Rinehart's (1991) model of power in health care, assumes that uncertainty and its effects on patient outcomes are interrelated. For instance, as patients become more knowledgeable about their health or illness (i.e., experience less uncertainty) they may become more compliant with medical

advice, cope better with health or illness, give higher ratings to the quality of care, have more sense of control over health and less anxiety, and have better health status. Each of these potential patient outcomes is discussed separately below.

Figure 3.2
Model of Uncertainty and Its Effect on Patient Outcomes



Note: Model adapted from Rinehart (1991).

Ratings of the Quality of Care

As cited in the review of the literature, there is a strong relationship between patients' ratings of the quality of care and perceptions of interpersonal communication with providers. Patients are likely to be more satisfied if they believe providers share full information and tell them about medical uncertainties related to the benefits and risks of medical or surgical procedures and resultant health implications. Additionally, patients who participate in decisions about their care are likely to be more satisfied with the overall quality of their care.

Health Status

Social psychology theories have emphasized the role of the psychological state on health outcomes. It is believed that uncertainty has an impact on patients' health status via increased feelings of powerlessness and helplessness (Taylor 1979). An increase in the amount of uncertainty experienced by patients may hinder good health outcomes (Brody 1992). For example, social psychology theories posit that patients' level of anxiety and depression depend on the role of uncertainty and patients' experiences of the uncontrollability of illness (Epstein 1972; Lazarus and Averill 1972). Seligman (1975) defines patients' sense of helplessness as a psychological state brought on by events that are uncontrollable. During hospital stays, patients may experience helplessness because the social environment reinforces the notion that particular events are beyond patients' personal control. For instance, many patients become dependent on others such as doctors, nurses, and family or friends, to meet their physical and emotional needs and to make decisions about their medical care.

Sense of Control

Uncertainty may cause patients to feel powerless and not responsible for their own fate. Patients' sense of control may be influenced by personal attitudes, self-image or self-confidence, and prior experience of illness (Roter and Hall 1992). It is understandable that patients would desire certainty and concrete information about their medical condition or illness to gain peace of mind or a sense of control over their health or illness (Haug 1994).

Compliance with Medical Advice

Much research has shown that patient compliance relates to how well providers communicate information to patients about their medical condition and how well patients

understand the information (Squier 1990; Hall, Roter, and Katz 1988; Becker 1985; Eraker et al. 1984; Hayes-Bautista 1976; Hulka et al. 1976). Numerous other factors affect whether patients adhere to medical advice, such as lack of financial resources, transportation problems, or barriers accessing health care services.

Coping with Health or Illness

Patients' uncertainty may be associated with their inability to cope with their medical condition, which may result in medical complications, decreased functional ability, and longer recovery periods. Experiences of illness may foster feelings of helplessness and alienation because patients are unable to control the state of their own health (Taylor 1982). Though trite, the old axiom, "knowledge is power," contains some truth. Patients with information and knowledge about coping with their medical condition are more likely to have better health outcomes than patients who are less well-informed and feel powerlessness over their health or illness (Kaplan, Greenfield, and Ware 1989).

Anxiety

The relationship between uncertainty and hospital-related stress has been discussed in the literature (Mishel 1987, 1984, 1980). Stress associated with hospital care may cause patients to feel anxious and vulnerable (McFarlane, Norman, Streiner, and Roy 1983). Anxiety or fear may interfere with understanding medical information and hospital discharge instructions. In *Experiment Perilous,* Fox (1959) reports that access to information had a positive effect on relieving patients' stress associated with uncertainty about their medical condition. Fox reported that patients cooperated more readily with treatment when physicians provided information about their medical care. The fundamental issue underlying

anxiety is that patients want reassurance from providers that they are making good decisions about their medical care and receiving high quality services.

In conclusion, the conceptual model presented in this chapter emphasizes that patients' experiences with uncertainty are a threat to their sense of control over their health and illness. Information may help to dispel patients' uncertainty or information anxiety. The research design and methodology of the present study are discussed in Chapter 4.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

RESEARCH DESIGN

The present study used data from a national study of hospital patients to investigate the association between patients' sociodemographic characteristics and reports of patient-provider communication problems. The data are derived from the 1993 National Patient Survey. This study explores the effect of patients' age and education, as well as other factors, on patients' perceptions of the quality of interpersonal communication with their providers.

The 1993 National Patient Survey

The National Patient Survey, conducted during 1993, gathered information via telephone interviews from adult patients recently discharged from medical, surgical, and childbirth services of a variety of hospitals nationwide including academic health centers, teaching hospitals, and non-teaching hospitals. The survey gathered data on patients' reports and ratings of the quality of hospital care services. The telephone interview focused on questions about patients' reports and ratings of the quality of patient-centered care in the following domains: respect for patients' needs and preferences for care, communication and information, coordination and integration of services, emotional support, physical comfort, involvement of family and friends, and financial counseling. The survey covered all regions of the country. Initially, an omnibus telephone-based survey was conducted to screen for

recently-discharged hospital patients. Then, for those respondents who reported that they were hospitalized in the past six months, the 1993 National Patient Survey was conducted in a follow-up telephone interview. The sample size totaled 1,896 respondents.

This dissertation used a selected sample of the National Patient Survey, excluding all cases related to childbirth services, which reduced the sample size to 1,557 persons. Among the 339 female patients excluded from the sample, all were younger than 40 years of age. These women were slightly more educated compared to the selected sample population; sixty-two percent (n=212) had some college education or college degrees, 31 percent (n=104) were high school graduates, and only 7 percent (n=23) had less than a high school education. Eighty-four percent were white (n=284), 8 percent Black (n=28), 5 percent Hispanic (n=18), and 3 percent were Asian (n=3) and other ethnicity (n=6). The majority (84 percent) of the excluded patients were married and reported slightly higher incomes compared to the selected sample population (22 percent reported incomes more than $50,000 compared to 16 percent of the selected sample; 19 percent reported incomes less than $15,000 compared to 25 percent of the selected sample). Eighty percent of women excluded from the sample had private insurance, 13 percent had Medicaid coverage, and 6 percent had no insurance. Among the 339 women, most reported excellent to good health status (53 percent reported excellent health, 38 percent reported very good health, and 8 percent reported good health).

The majority of the patients in the sample were between 18 and 64 years of age, had higher education levels, were white, had private insurance, and reported their health status as either good, very good, or excellent. Almost 58 percent of the sample were female respondents. Sixty percent of patients received surgical services and slightly more than three-quarters of all patients were in the hospital less than six days.

RESEARCH QUESTIONS AND HYPOTHESES

Understanding the many factors that influence patients' reports of problems with their care is a challenge. Researchers have shown that patients' age and education are likely to have an effect on patient-provider communication. For instance, it has been reported that younger and middle-aged patients are likely to report more problems with their care than patients 65 years of age and older (Cleary et al. 1991; Meterko, Nelson, and Rubin 1990). Moreover, patients' educational attainment has been shown to have a small effect on patients' reports of problems with interpersonal aspects of care (Cleary et al. 1991). Generally, such studies have examined patients' age and education as separate "main effects" on interpersonal communication between patients and providers. For instance, many investigators have found that patients' age is associated with communication problems, but often have failed to examine the "interaction effect" between patients' age and education on reports of problems.

The present study was designed to examine whether patients' age and education moderate the relationships between other patients' characteristics and reports of communication problems. For instance, this study sought to determine the degree to which the explanatory variables may differently affect younger patients than older patients, as well as among more-educated patients and less-educated patients. To investigate several possible interactions among the explanatory variables, subsets of the patient population were examined based on age and education groupings.

A series of regression analyses was conducted to test the sensitivity of results to alternative model specifications. These alternative models were designed to examine different forms of the dependent variable, patients' reports of communication problems; definitions of the dependent variable are discussed in a later section. Different models also were used to examine differential effects in age and education subgroups.

Research Question: How does the nature of communication problems differ by age and education and their interaction with each other and other variables?

This research question is intended to advance knowledge in the literature to explore the interaction of age and education and other major determinants of patients' perceptions of the quality of their interpersonal communication with providers. As mentioned previously, much of the literature focuses on the "main effect" of age or education on patients' perceptions of the quality of care, but often fails to investigate confounding factors or "interaction effects" between these two variables. Thus, to address these shortcomings in the literature, the present research investigates the main effects and interaction effects of patient characteristics on their reports of communication problems. Specifically, this investigation seeks to explore whether patients of a particular age and education group are likely to respond differently to suboptimal communication than other patients. For instance, are younger college-educated patients likely to report more communication problems than their older counterparts? Are younger patients with less than high school education likely to report more communication problems than their older counterparts?

Hypothesis 1: The difference in the *quantity* of communication problems reported between younger and older patients is accounted for by additional factors (other than age) such as education, insurance, health status, income, race, length of hospital stay, and type of service.

Hypothesis 2: The difference in the *type* of communication problems reported between younger and older patients is accounted for by additional factors (other than age) such as education, insurance, health status, income, race, length of hospital stay, and type of service.

While the literature suggests that younger and older patients differ in their reports of communication problems, such studies do not significantly advance knowledge about understanding the possible reasons that younger patients are likely to report more problems with their care than older patients. One hypothesis is that younger patients are likely to be better educated than older patients and that educational attainment influences perceptions of the quality of care. However, there are many possible explanations for the finding that younger patients are likely to report more problems with their care.

The present research hypothesizes that patients' age and educational attainment would likely interact with each other. That is, if younger patients are likely to be better educated and better-educated patients report more problems with their care, then such differences potentially explain the association between patients' reports of problems and age. Since better-educated patients are likely to have higher socioeconomic status (e.g., private insurance, high income), it is probable that they may have better access to health care services and information on a range of health and medical issues than patients with lower socioeconomic status, particularly those with no insurance.

This research hypothesized that patients of different socioeconomic status levels are likely to have different educational and financial resources at their disposal. As cited in

Chapter 2, educational attainment is used often as an indicator of socioeconomic status because it relates to employment opportunities and income. It is speculated that socioeconomic status may relate to patients' involvement in decisions about their care. For instance, it is likely that persons with low socioeconomic status may have fewer skills to negotiate treatment decisions and less family or social support while in hospital than other patients. Such factors may influence patients' experiences of illness and ability to participate in decisions about their care.

Also, this research conjectures that younger and better-educated patients may be more likely to be critical consumers of their care than other patients because they are likely to have higher expectations of interpersonal communication than other patients. Personal expectations may confound patients' perceptions of the quality of interpersonal communication. For instance, when patients do not receive the information that they expect to receive from their providers, they are more likely to be dissatisfied with the communication of information. It is possible that better-educated patients may have unrealistically high expectations of interpersonal communication with their providers, and thus, be disappointed when providers spend little time regarding their concerns. Furthermore, it is believed that better-educated patients are likely to have more information resources (e.g., broader social networks) to discuss health and medical issues. Finally, empirical research has suggested that better-educated patients tend to ask more questions during their medical encounters, which enables them to clarify confusing matters and understand new information.

Alternatively, the present research speculates that less-educated patients may be less likely to report suboptimal communication with providers because (1) they may have lower

expectations of their care than better-educated patients; (2) they may have a smaller arena of information resources available to them than better-educated patients; and (3) they may have inadequate skills in negotiation, information processing, and bargaining at their command. Moreover, Pendleton and Bochner (1983) suggest that differences in social class, cultural understanding of health, and knowledge of medical issues attributes to a "halo effect," which may explain the finding that less-educated patients report fewer problems with their care.

Another hypothesis is that younger patients are likely to perceive events differently than older patients because they have different human development needs (e.g., need for reassurance and guidance). Also, younger patients are likely to report more problems with their care because they may have less overall experience with the health care system, in general, and illness, in particular. Moreover, they may have shorter tenured relationships with providers, which may relate to patients' reports of uncertainty about their illness and medical treatment.

Finally, the present research explores whether other sociodemographic characteristics including health status, insurance, income, and race interact with age and education to influence reports of communication problems. As emphasized in the review of the literature, prior research has drawn attention to the relationship between socioeconomic status (measured by various variables including education, race, and economic resources) and access to care (Weissman and Epstein 1994; Epstein et al. 1990), specifically risk of substandard care (Burstin, Lipsitz, and Brennan 1992). Moreover, insured and uninsured patients are likely to experience different processes of care (Wenneker, Weissman, Epstein 1990). Furthermore, researchers have suggested that health differentials between Whites and Blacks are related to several factors associated with conditions of low socioeconomic status,

including poor knowledge of health promotion and disease prevention approaches, and higher health risks associated with social environments, including dangerous occupations (Manton, Patrick, and Johnson 1987). Differences in socioeconomic status or sociocultural backgrounds between patients and providers may be associated with communication problems and general understanding of patients' preferences and expectations. Finally, as much as it relates to socioeconomic status, patients' insurance, income, and race are likely to be associated with patients' perceptions of the quality of care.

Hypothesis 3: Younger and older patients are likely to report different types of communication problems.

As discussed in Chapter 2, there is empirical evidence that age is associated with interpersonal communication between patients and providers. Studies suggest that younger and older patients tend to report different amounts of problems with their care. Yet, research studies have not indicated clearly the types of communication problems that are of concern to specific age cohort groups. Thus, the above hypothesis explores whether younger and older patients are likely to report different types of communication problems. Are younger and older patients likely to report similar or different types of problems concerning the communication of information with their providers? If so, what issues are paramount to younger and older patients?

Obtaining information on the harmful side effects of medications may be a serious concern among patients who use multiple medications. Understanding the adverse effects caused by dangerous interactions between two or more drugs are important concerns for some patients, especially the elderly. Since elderly patients are likely to use more prescribed

medications than younger healthier patients, they are at increased risk for possible adverse drug reactions. Drug interactions may cause elderly patients to experience dizziness or memory loss. Hip fractures among the elderly may relate to drug-induced falls. While older patients may experience more problems related to adverse effects of medications, the need for information on the side effects of medications appears to be a universal concern among patients of all ages. The above hypothesis tests whether information on the side effects of medications is an important concern among all patients or specific age cohort groups.

It is understood that patients want comprehensive information about their medical condition and treatment to help them recover from illness. It is hypothesized that patients, irrespective of age, are likely to be concerned with some universal concerns such as information on the harmful side effects of medications, when to resume usual activities, danger signs after hospital discharge, and explanations about their medical test results. For instance, all patients are likely to be concerned with information about when they may resume usual activities, such as returning to work or driving a car. While "usual activities" may have a different meaning for younger and older patients, such information may be considered essential to help patients cope with their illness and recovery.

Other communication issues that relate to information access will be examined. Such communication issues include whether patients believed they received understandable answers to their questions, conflicting information, understandable explanations about their tests results. Based on the review of the literature, as discussed in Chapter 2, it is hypothesized that younger patients may report more problems with information uncertainty than older patients. Again, older patients may have less anxiety about communication issues

with their providers because they may have more experience with the health care system, in general, and long-term and stable relationships with their providers, in particular.

RESEARCH METHODOLOGY

Analyses

To test the first and second research hypotheses about the effect of patients' age and education on reports of the *quantity* and *types* of communication problems, multiple regression equations were estimated. The multivariate analyses were designed to test for both the "main effects" and "interaction effects" of patients' characteristics on reports of problems, controlling for the effects of all other variables. The dependent variables were patients' reports of suboptimal communication, measured by the *quantity* and *types* of problems. Independent variables included age, education, insurance type, income, type of services received, race, and length of hospital stay.

Because of expectations that patients' age and education would be confounding factors, analyses of subsets of the patient population based on separate age and education subgroups were conducted. Alternative regression models were designed to examine different forms of the dependent variable. To determine the differential impact of patients' age and education on the dependent variable in different subgroups, stratified analyses were conducted. Regression coefficients from the total sample demonstrate the main effect of independent variables on the dependent variable. Regression coefficients from analyses of different subgroups of the patient population allows an opportunity to inspect for interaction effects between patients' age, education, and other explanatory variables.

Linear regression analyses were used to estimate the extent to which patients' reports of communication problems were associated with their sociodemographic characteristics. Ordinary least-squares methods was used to estimate parameters in these models. Probit analysis, was used with a dichotomous form of the dependent variable, whether patients reported one or more communication problems versus those who reported none.

The third research hypothesis sought to investigate whether younger and older patients reported different types of communication problems. Linear regression analyses were applied with two dependent variables, whose specification is discussed in a later section. Descriptive statistics were used to identify which specific communication issues were likely to be important concerns among different subsets of the patient population, based on age and education groupings.

VARIABLE DEFINITION

Dependent Variables

The nature of communication problems is defined as the *quantity* and *type* of problems with the acquisition of information related to patients' diagnostic, therapeutic, or preventive care. For purposes of this investigation, the "Uncertainty Scale" was constructed to calculate the total score of communication problems reported by patients. The dependent variables were based on different measures of the Uncertainty Scale. Table 4.1 provides the frequency distribution of patients' reports of communication problems.

Most patients tend to report relatively small amounts of problems with various items of the Uncertainty Scale (Table 4.1). The most common communication problem reported by patients was "not enough information on the side effects of medications." The least common

communication problems was "withheld information" by providers. The present research investigates whether types of communication problems vary by patients' age and educational attainment; this issue is discussed in more detail in Chapter 5.

Table 4.1
The Uncertainty Scale: Frequency of Communication Problems Reported by Patients

Variable	Individual Items of the Uncertainty Scale	Number of Patients	Percent of Patients
UNC_1	Patient received no understandable answers to questions from doctor	130	8
UNC_2	Patient received no understandable answers to question from nurse	163	11
UNC_3	Patient reported doctors or nurses withheld information	105	7
UNC_4	Patient received conflicting information from doctors and nurses	231	15
UNC_5	Patient received not enough information on side effects of medications	449	30
UNC_6	Patient received not enough information needed to recover after discharge	130	8
UNC_7	Patient received not enough information about danger signals after discharge	283	18
UNC_8	Patient received not enough information on when to resume usual activities	297	20
UNC_9	Patient received no understandable explanation why major tests were done	136	9
UNC_10	Patient received no understandable explanation of the results of major tests	176	12

	Total Communication Problems	Number of Patients	Percent of Patients
	One or more problems	824	53
	No problems	733	47
	TOTAL	1,557	100%

SOURCE: The 1993 National Patient Survey, The Picker Institute.

Independent Variables

To define meaningful categories for patients' age and educational level, dichotomous variables were created. Respondents were grouped into three major age categories: early adulthood (18-40 years of age), middle adulthood (41-64 years of age), and late adulthood (65 years of age and older). The data on educational attainment are grouped into four major categories: less than high school, high school graduate, some college, and college graduate. Other independent variables were used as controls to isolate the effects of these variables such as income, insurance, type of services received.

There is strong evidence that patients' health status and reports of communication problems are interrelated (Cleary et al. 1991; Cleary and McNeil 1988). However, the cross-sectional research design of the present study does not allow an opportunity to disentangle the relationship between these two variables. There are limitations in using retrospective reports to control for patients' health status. For instance, patients' views of their retrospective health status may fluctuate over time depending on changes in their symptoms or present health status. Moreover, other factors may influence patients' assessments of their health status such as an unwillingness to be critical of the medical care they received, lest patients believe that they received suboptimal care. Nonetheless, the present research sought to use patients' retrospective health status as an exogenous variable, despite inherent limitations in the reliability of such data.

Table 4.2 provides the coding definitions of the independent variables used in this research.

Table 4.2
Independent Variable Domains

Variable Name	Coding	Variable Label
AGE		AGE CATEGORY
AGE_YNG	DV: 1 =	18 - 40 years of age
	0 =	otherwise
AGE_OLD	DV: 1 =	65 years of age and older
	0 =	otherwise
EDUCATION		EDUCATION CATEGORY
LTHS	DV: 1 =	Less than high school graduate
	0 =	otherwise
HSGRAD	DV: 1 =	High school graduate
	0 =	otherwise
LTCOLL	DV: 1 =	Some college
	0 =	otherwise
INCOME		HOUSEHOLD INCOME
INC_FINL	Categorical	1=Less than $15,000
		2=$15,001 - $35,000
		3=$35,001 - $50,000
		4=More than $50,000
INSUR		TYPE OF HEALTH INSURANCE
I_PRIVAT	DV: 1 =	Private insurance
	0 =	otherwise
I_MEDICAID	DV: 1 =	Medicaid
	0 =	otherwise
I_MEDICARE	DV: 1 =	Medicare
	0 =	otherwise
SERVICES		TYPE OF SERVICES RECEIVED
PT_MED	DV: 1 =	Medical patient
	0 =	otherwise
HEALTH		HEALTH STATUS
HLTH_GEN	Categorical	1=poor
		2=fair
		3=good
		4=very good
		5=excellent
LENGTH OF STAY		LENGTH OF HOSPITAL STAY
LOS	DV: 1 =	Length of stay more than 6 days
	0 =	otherwise
RACE		RACE
WHITE	DV: 1 =	white
	0 =	otherwise

SAMPLE CHARACTERISTICS

This section provides information about the personal characteristics of the sample population. Table 4.3 provides a complete distribution of characteristics of the sample.

Age

Patients' ages ranged from 18 to 65 years and older. Thirty-six percent were 18-40 years of age, 42 percent were 41-64 years of age, and 22 percent were 65 years and older.

Education

The patient population was skewed toward patients with higher education levels. Approximately 85 percent of all patients had high school education or more. Thirty-eight percent had high school degrees, 25 percent had some college, 22 percent were college graduates or post-graduates, and only 15 percent had less than high school education. Among the 36 percent of patients ages 18-40 years, nearly 48 percent had some college education or college degrees. The data showed a significant correlation between age 65 years and older and less than high school education ($r = .13$, $P<.0000$).

Income

Patients in the sample had incomes that ranged from less than $7,500 to more than $50,000. The data showed a significant correlation between income and education ($r = .39$, $P<.0000$). Twenty-five percent of the sample reported incomes $15,000 or less. Among this group, 73 percent had less than high school education or high school diplomas. A larger portion of the sample (nearly 38 percent) reported middle incomes ranging from $15,000 to

$35,000. Twenty-one percent reported income levels ranging from $35,001 to $50,000. Sixteen percent reported incomes more than $50,000; among this group, 72 percent had some college or college degrees (P<.0000).

Health Insurance

The majority of the sample had private insurance (62 percent), while the remainder had Medicare (23 percent), Medicaid (6 percent), or no insurance (7 percent). Among those with private insurance, 73 percent had incomes $25,000 or higher. Among those enrolled in the Medicaid program, 71 percent reported incomes less than $15,000. Among the Medicare enrollees, nearly 70 percent had incomes $25,000 or less (P<.0000).

Health Status

The health status variable relied on patients' reports of their pre-existing health status, reflecting general health status prior to their hospitalization. The percentage of the patient population reporting themselves in fair or poor health was 21 percent, totaling 323 persons. Persons with low income, less than $15,000, were nearly twice as likely as the nonpoor to report themselves in only fair or poor health (38 percent and 62 percent, respectively). While fewer white patients reported themselves in fair or poor health, the proportion of non-white patients reporting fair or poor health increased (20 percent and 25 percent, respectively).

Table 4.3
Characteristics of the Sample Population

Variable	Variable Values and Labels	Number	Percent	Mean	Standard Deviation
AGE					
	1 = 18 - 40 years	561	36.0		
	2 = 41 - 64 years	654	42.0		
	3 = 65 years and older	340	21.8		
	don't know/refused	2	0.1		
	N=	1557	100%	1.86	0.75
EDUCATION					
	1 = Less than high school	227	14.6%		
	2 = High school graduate	591	38.0		
	3 = Some college	389	25.0		
	4 = College graduate/post-graduate	342	22.0		
	don't know/refused	8	0.5		
	N=	1557	100%	2.55	0.99
INCOME					
	1 = Less than $7,500	143	9.2		
	2 = $7,5001 - $15,000	248	15.9		
	3 = $15,001 - $25,000	290	18.6		
	4 = $25,001 - $35,000	291	18.7		
	5 = $35,001 - $50,000	328	21.1		
	6 = More than $50,000	250	16.1		
	don't know/refused	7	0.4		
	N=	1557	100%	3.75	1.56
INSURANCE					
	1 = Medicare	359	23.0		
	2 = Medicaid	90	5.8		
	3 = Private insurance	973	62.5		
	4 = No insurance	114	7.3		
	don't know/refused	21	1.3		
	N=	1557	100%	2.65	1.13
HEALTH STATUS					
	5 = Excellent	273	18		
	4 = Very Good	497	32		
	3 = Good	459	30		
	2 = Fair	226	15		
	1 = Poor	97	6		
	don't know/refused	5	0		
	N=	1557	100%	3.4	1.12
GENDER					
	1 = Female	895	57.5		
	0 = Male	662	42.5		
	N=	1557	100%	0.57	0.49

Table 4.3 (cont.)
Characteristics of the Sample Population

Variable	Variable Label	Number	Percent	Mean	Standard Deviation
RACE/ETHNICITY					
	1 = White	1340	86.1		
	2 = Black	105	6.7		
	3 = Asian	8	0.5		
	4 = Hispanic	53	3.4		
	5 = Other	46	3.0		
	don't know/refused	5	0.4		
	N=	1557	100%	1.30	0.90
MARITAL STATUS					
	1 = Married	994	63.8		
	0 = Not Married	560	36.0		
	don't know/refused	3	0.2		
	N=	1557	100%	0.64	0.48
TYPE OF SERVICES					
	1 = Medical patient	623	40.0%		
	0 = Surgical patient	934	60.0		
	N=	1557	100%	0.40	0.49
LENGTH OF STAY					
	1 = More than 6 days	327	21.0		
	0 = Less than 6 days	1222	78.5		
	N=	1557	100%	0.21	0.41
HOSPITALIZATION					
	1 = More than once in past 6 months	352	22.6		
	0 = Once in past 6 months	1205	77.4		
	N=	1557	100%	0.23	0.42
HOSPITAL TYPE					
	1 = Academic health centers	121	7.8		
	2 = Non-teaching hospitals	617	39.6		
	3 = Teaching hospital	819	52.6		
	N=	1557	100%	2.45	0.64
HEALTH STATUS ACCORDING TO EXPECTATIONS					
	1 = Better than prior expectations	375	24.1		
	2 = Worse than prior expectations	170	10.9		
	3 = Same as prior expectations	988	63.5		
	N=	1557	100%	2.40	0.85
	TOTAL SAMPLE	N=1557	100%		

The results of the descriptive and multivariate analyses of the present study are discussed in Chapter 5.

CHAPTER 5

FACTORS INFLUENCING PATIENTS' REPORTS OF COMMUNICATION PROBLEMS WITH PROVIDERS

OVERVIEW

This chapter describes findings from multivariate and bivariate analyses to test the research hypotheses. Multivariate analyses were used to estimate the probability that patients would report communication problems based on sociodemographic characteristics and their interaction with other explanatory variables. The present research confirmed findings from previous studies that reported that selected patient characteristics were associated with patients' reports of problems with interpersonal aspects of care, including interpersonal communication (Cleary et al. 1991; Meterko et al. 1990). Table 5.1 presents findings from bivariate analyses, which demonstrate that patients who were more likely to report communication problems included those who were younger, better educated, uninsured, medical patients, and those who reported poor health status.

Spearman's correlations were used to determine the associations among the independent variables. Table 5.2 presents intercorrelations among the eight independent variables, along with associated probabilities less than or equal to 0.10. Age was moderately correlated with insurance source ($r = -.47$); younger age was associated with private

insurance, while older age was associated with Medicare coverage. Also, education was moderately correlated with income (r = .40), indicating that patients with higher educational attainment reported higher incomes. Since no strong correlations were demonstrated between these independent variables, each was included in the research model.

Table 5.1
The Association Between Patient Characteristics and Communication Problems

Patient Characteristics	TOTAL	No problems	1-2 problems	3 + problems
Age[a]	n (%)			
18-40 years	561	247	187	127
	(36)	(44)	(33)	(23)
41-64 years	654	312	221	121
	(42)	(47)	(34)	(18)
65 years and older	340	173	120	47
	(22)	(51)	(35)	(14)
Education				
Less than high school	227	102	89	36
	(15)	(45)	(39)	(16)
High school graduate	591	283	197	111
	(38)	(48)	(33)	(19)
Some college	389	185	125	79
	(25)	(48)	(32)	(20)
College graduate	342	158	116	68
	(22)	(46)	(34)	(20)
Insurance				
Private	973	473	319	181
	(63)	(49)	(33)	(19)
Medicare	359	173	126	60
	(23)	(48)	(35)	(17)
Medicaid	90	34	38	18
	(6)	(38)	(42)	(20)
None	114	41	40	33
	(7)	(36)	(35)	(29)
Type of services[b]				
Medical patient	623	276	196	151
	(40)	(44)	(31)	(24)
Surgical patient	934	457	333	144
	(60)	(49)	(36)	(15)

Table 5.1 (cont.)
The Association Between Patient Characteristics and Communication Problems

Patient Characteristics	TOTAL	No problems	1-2 problems	3 + problems
Health status[c]				
Excellent	273	153	83	37
	(18)	(56)	(30)	(14)
Very good	497	262	164	71
	(32)	(53)	(33)	(14)
Good	459	205	163	91
	(30)	(45)	(35)	(20)
Fair	226	82	81	63
	(15)	(36)	(36)	(28)
Poor	97	30	37	30
	(6)	(31)	(38)	(31)
TOTAL	1557	732	528	295
	100%	47%	34%	19%

NOTE: [a] Distribution significantly different (P <.05 chi-square test)
[b] Distribution significantly different (P <.01 chi-square test)
[c] Distribution significantly different (P <.001 chi-square test)

Table 5.2
Intercorrelations of Patients' Sociodemographic Variables

VARIABLES	Age	Education	Health Status	Income	Insurance	Medical services	White	Length of stay
Age	--							
Education	-.04	--						
Health Status	-.14	.17	--					
	(.000)	(.000)						
Income	-.15	.40	.25	--				
	(.000)	(.000)	(.000)					
Insurance	-.47	.03	.13	.19	--			
	(.000)		(.000)	(.000)				
Medical services	.10	-.06	-.20	-.13	-.05	--		
	(.000)	(.021)	(.000)	(.000)	(.026)			
White	.13	.06	.02	.07	-.09	-.02	--	
	(.000)	(.018)		(.005)	(.000)			
Length of stay	.15	-.06	-.11	-.13	-.14	.01	-.04	--
	(.000)	(.018)	(.000)	(.000)	(.000)		(.077)	

NOTE: Probabilities less than or equal to 0.100 are given in parentheses beneath each associated correlation.

MEASURES OF COMMUNICATION PROBLEMS

Quantity of Communication Problems

The present research focused on three measures of the *quantity* of communication problems reported by patients. First, patients' total problem score was calculated from the Uncertainty Scale. This variable, labeled UNC_TOT, measured interval-level data with scores ranging from 0-10 total problems. Linear regression analyses were used to estimate the probability that patients' total problems would be associated with their sociodemographic characteristics. As illustrated in Table 5.3, the frequency distribution was not normally distributed; it was skewed to patients *not* reporting significant amounts of problems with providers. Forty-seven percent of patients reported no communication problems, nearly 23 percent reported one problem, 11 percent reported two problems, and the remainder reported three or more problems. These findings suggest that the true relationship of the dependent variable may be biased or misrepresented by a scale ranging from 0-10 because nearly half the sample reported no problems. Yet, this study assumed that UNC_TOT would be linearly related to the independent variables when the relationship may more likely be non-linear because of the high number of zero values present in the dependent variable.

The second dependent variable focused solely on those patients who reported at least one or more communication problems. Slightly more than half the patient population (53 percent) reported at least one or more communication problems with problem scores ranging from 1 to 10. This variable, labeled UNC_SCOR, provided an opportunity to focus on a subset of the patient population that reported at least one or more communication problems, excluding patients who reported no problems. Linear regression analysis was used to

estimate the probability that patients' total problem score was related to individual characteristics of patients or an interaction of patient characteristics. The purpose of this investigation was to focus more thoroughly on the characteristics of patients who reported at least one or more problems. The present research considered application of Tobit analysis to this dependent variable because Tobit corrects the bias in the sample that may be introduced by eliminating the many observations of patients who report no problems in the sample. Tobit would incorporate a transformed version of UNC_PROB as an explanatory variable. Since UNC_PROB achieved little explanatory power (as discussed in a later section), a transformed version of it would unlikely be significant in an UNC_SCOR regression equation using Tobit.

The third dependent variable, labeled UNC_PROB, was a dichotomous variable designed to compare two segments of the patient population: those who reported problems and those who reported no problems. Probit analysis was conducted to determine which sociodemographic characteristics were associated with whether or not patients were likely to report one or more communication problems. This type of investigation provided a broad-based profile of characteristics of patients who were likely to report at least one or more communication problems. Table 5.3 shows that approximately 53 percent of the total sample, totaling 724 patients, reported at least one or more communication problems.

Table 5.3
Total Sum Scores of Patients' Reports of Communication Problems

Total Problem Score	Frequency	Percent	Cumulative Percent
0	733	47.1%	47.1%
1	355	22.8	69.9
2	174	11.2	81.1
3	99	6.4	87.4
4	67	4.3	91.7
5	52	3.3	95.1
6	27	1.7	96.8
7	16	1.0	97.8
8	15	1.0	98.8
9	12	0.8	99.6
10	7	0.4	100.0
Total	1557	100.0	100.0

NOTE: Mean = 1.3, Median = 1.0, and Standard deviation = 1.9

Types of Communication Problems

Factor analysis was conducted to determine whether the ten communication problems included in the Uncertainty Scale could be condensed into general themes or factors. Taking into account theoretical relationships among the variables, the item groups (e.g., clusters based on factor loadings) that emerged from the factor analysis distinguished two different dimensions that appear to underlie patients' reports of communication problems. Appendix I contains a detailed discussion of the methodological issues involved in the factor analysis technique used in the present study.

Factor loadings were estimated using the principal-components method. An orthogonal rotation, based on a varimax rotation criterion was calculated (Kim and Mueller 1978). As displayed in Table 5.4, the rotated factor matrix showed that Factor 1 clearly grouped UNC_1, UNC_2, UNC_3, UNC_4, UNC_9, and UNC_10. Factor 2 assumed the

grouping of UNC_5, UNC_6, UNC_7, and UNC_8. However, the factor loadings for one variable, UNC_6, indicated that the fit for this particular variable may not be exact. That is, UNC_6 had a slightly larger loading with the second factor (.5462) than the first factor (.4516); this "split-load" distribution presents a challenge to interpretation. Theoretically, "information needed to recover after hospital discharge" (UNC_6) is more similar to other variables that concern issues of hospital discharge, which were significantly loaded in the second factor (UNC_5, UNC_7, and UNC_8), than issues related to the first factor, which concerns understandable responses to patients' questions or concerns. Even though, the factor loadings for UNC_6 are less distinctive than the other items of the Uncertainty Scale, it was interpreted as part of the second factor because of its conceptual similarity to other communication issues related to information about hospital discharge and follow-up care.

Table 5.4
Factors Analysis of the Uncertainty Scale:
Patients' Reports of Communication Problems

Variable	Individual Items of the Uncertainty Scale	Rotated Factor Matrix	
		Factor 1	Factor 2
UNC_1	Patient did not get understandable answers to questions from doctor	*.7467*	.0948
UNC_2	Patient did not get understandable answers to questions from nurse	*.5914*	.1188
UNC_3	Patient believed that doctors or nurses withheld information	*.6844*	.0820
UNC_4	Patient believed doctors or nurses gave conflicting information	*.6623*	.0495
UNC_5	Patient not given information on important side effects of medications	.1378	*.7104*
UNC_6	Patient not given all the information needed to help recover after illness	.4516	*.5462*
UNC_7	Patient not given information on danger signs about illness after discharge	.1426	*.7783*
UNC_8	Patient not given information on resuming usual activities (e.g, work)	.0442	*.6392*
UNC_9	Patient received no understandable explanations of purpose of medical tests	*.5694*	.3589
UNC_10	Patient received no understandable explanations of the results of tests	*.6662*	.3537

NOTE: Cronbach's Alpha was 0.79; the standardized item Alpha was 0.80.

To assess the *types* of communication problems reported among patients, the factor scores of the Uncertainty Scale suggested that two general factors could be interpreted as problems associated with the *clarity* of information given to patients about their medical diagnosis, prognosis, and treatment or follow-up care after hospital discharge. FACTOR 1 was interpreted as problems associated with the clarity of information, in which patients reported difficulty understanding information or explanations from their providers during their hospitalization. Factor 2 was interpreted as problems with the clarity of information related to medical advice or instructions after hospital discharge. That is, patients were dissatisfied with the type of information related to medical treatment, recovery, and follow-up care after hospital discharge. These two general factors specify patients' experiences with uncertainty about their illness related to suboptimal communication with their providers.

Table 5.5 shows the coding schemes of the five different dependent variables.

Table 5.5
Dependent Variable Coding: Patients' Reports of Communication Problems

Variable	Coding	Variable Label
Quantity Of Communication Problems		
UNC_TOT		Total Sum Score of Communication Problems
	Interval	Amount of problems, scores ranging: 0 - 10
UNC_SCOR		Total Sum Score of Communication Problems
	Interval	Amount of problems, scores ranging: 1 - 10
UNC_PROB		Whether or not patient reported at least one or more problems
	DV: 1 =	Patient reported at least one or more problems
		0 = no problem reported
Type Of Communication Problems		
FACTOR_1		Clarity of information: understandable responses to questions during hospital stay
	Interval	Total score noting patients' reports of problems: Factor 1
FACTOR_2		Clarity of information: issues related to hospital discharge and follow-up care
	Interval	Total score noting patients' reports of problems: Factor 2

Table 5.5 (cont.)
Dependent Variable Coding: Patients' Reports of Communication Problems

Variable	Coding	Variable Label
Components Of The Uncertainty Scale		
UNC_1	DV: 1 =	Patient did not get understandable answers to questions from doctor
UNC_2	DV: 1 =	Patient did not get understandable answers to questions from nurse
UNC_3	DV: 1 =	Patient reported that doctors or nurses withheld information
UNC_4	DV: 1 =	Patient reported that doctors or nurses gave conflicting information
UNC_5	DV: 1 =	Patient not given information on important side effects of medications
UNC_6	DV: 1 =	Patient not given all the information needed to help recover after illness
UNC_7	DV: 1 =	Patient not given information on danger signs about illness after discharge
UNC_8	DV: 1 =	Patient not given information on resuming usual activities (e.g, work)
UNC_9	DV: 1 =	Patient received no understandable explanations of purpose of medical tests
UNC_10	DV: 1 =	Patient received no understandable explanations of the results of tests 0 = no problem reported

NOTE: DV = dichotomous variable

Table 5.6 illustrates Spearman's correlations showing associations between several independent variables and the dependent variable, patients' reports of communication problems, measured by the UNC_TOT variable. Although the present research used measures of patients' reports of communication problems that were different from those of Cleary and colleagues (1991), they found similar relations.

Table 5.6
Correlations Between Patients' Total Problem Score and Sociodemographic Characteristics

VARIABLES	*r*	P
Age	-.08	.002
Education	.00	.971
Health Status	-.18	.000
Insurance	.04	.143
Income	-.05	.039
Medical Services	.08	.001
Race	.00	.963
Length of Stay	.06	.017

NOTE: N = 1,557

As illustrated above, patients' age, health status, income, medical services, and length of stay all appear to be slightly but reliably associated with patients' reports of communication problems. Contrary to what was expected, patients' educational attainment was not related to patients' reports of communication problems in the patient population of the 1993 National Patient Survey. Finally, these findings do not reveal problems of multicollinearity between the variables because the coefficient values are rather low.

PREDICTING PATIENTS' REPORTS OF COMMUNICATION PROBLEMS

To examine the unique effect of the explanatory variables in relation to each dependent variable, a series of regression analyses was conducted to test the sensitivity of results to alternative model specifications. First, this investigation examined the main effects of patient characteristics on reports of communication problems in the total analysis sample. To more fully understand the interrelationships among the independent variables and patients' reports of problems, these analyses were repeated in subsets of age and education subgroups.

Findings from the multivariate analyses are reported only for those items for which statistically significant differences were measured ($P<.01$) among the aggregate sample and ($P<.05$) among the comparison subgroups of interest. The coefficients represent the contribution of each independent variable to the dependent variable -- patients' reports of communication problems -- controlling for the other independent variables.

Differences In The *Quantity* Of Communication Problems Among Younger And Older Patients

The first phase of this investigation focused on determining the main effects of the independent variables on the dependent variables. Multivariate analyses of aggregate samples of the patient population were conducted to determine which patient characteristics were associated with patients' reports of the *quantity* of communication problems. The regression analyses relied on three dependent variables: UNC_PROB, UNC_TOT, and UNC_SCOR. These variables were defined in the previous section. The findings from these multivariate analyses are presented in Table 5.7.

Young and old age achieved significance related to patients' total problem scores (UNC_TOT and UNC_SCOR). Patients 18-40 years of age were likely to report more communication problems than middle-aged patients. Regressions based on the UNC_SCOR dependent variable showed that patients 65 years of age and older were likely to report fewer total problems than middle-aged patients. For instance, the expected total problem score was roughly one problem less for older-age patients than middle-aged patients. The t-statistic indicates that the older age variable is statistically significant at the 99 percent confidence level. Additionally, patients who had high school education or less were likely to report fewer communication problems (UNC_TOT) than college graduates. Also, the education coefficient for "less than high school" achieved significance in relation to patients' total problem score, ranging from 1-10, indicating that patients with less than high school education were likely to report fewer communication problems than patients with more education (UNC_SCOR).

Table 5.7
Regression Analyses Predicting Patients' Reports of the *Quantity* of Communication Problems

	Coefficients from Three Regression Equations		
	Quantity of Problems		
Predictors	1 UNC_PROB[a]	2 UNC_TOT[b]	3 UNC_SCOR[c]
18-40 years of age	.08	.32**	.37*
65 years and older	-.14	-.69**	-.99**
Less than high school	-.08	-.46*	-.68*
High school graduate	-.13	-.35*	-.37
Some college	-.15	-.27	-.33
Health Status	-.12**	-.28**	-.21**
Medicaid	-.14	-.46	-.58
Medicare	-.15	-.12	.15
Private Insurance	-.23	-.49*	-.37
Income	.03	-.03	-.06
Medical Patient	.08	.39**	.68**
White	.02	.15	.17
Length of stay more than 6 days	.16	.10	-.07
Constant	-.07	2.80**	3.64**
N	1510	1510	799
R-squared	.53	.07	.08
F		8.59**	5.56**

NOTE: * $P \leq 0.01$
** $P \leq 0.001$

[a] Probit analysis using dependent variable: patients who reported at least one or more problems
[b] Linear regression using dependent variable: patients' total problem score (ranging from 0 - 10)
[c] Linear regression using dependent variable: patients' total problem score (ranging from 1 - 10)

The second phase of this investigation addressed the interaction effects between patients' characteristics on patients' reports of the quantity of communication problems. The disaggregated samples of the patient population revealed similar results to the aggregate sample. Younger patients who had less than high school education were likely to report more total problems (see Table 5.9, Table 5.10). Subset analyses of different education groups revealed that young age was significantly associated with patients' total problem scores (UNC_TOT and UNC_SCOR). Also, findings indicate that among college-educated patients, those who were older age, 65 years of age and over, were likely to report fewer total problems than middle-aged patients ($P<.01$). Finally, older age was a significant indicator of total problems (measured by UNC_SCOR) among the subgroup of patients who were high school graduates ($P<.05$).

Table 5.8
Probit Analyses Predicting Patients' Reports of the *Quantity* of Communication Problems Based on Age and Education Subsamples

UNC_PROB+	AGE SUBGROUPS			EDUCATION SUBGROUPS++			
Patient Characteristics	18-40 yrs	41-64 yrs	65 + yrs	LTHS	HSGRAD	LTCOLL	COLLGRD
18-40 years of age	--	--	--	.25	.09	.03	.07
65 years and older	--	--	--	.04	-.04	-.26	-.26
Less than high school	-.08	-.25	.10	--	--	--	--
High school graduate	-.09	-.19	-.08	--	--	--	--
Some college	-.13	-.17	-.11	--	--	--	--
Health Status	-.07	-.15**	-.14*	-.16*	-.11*	-.13*	-.13*
Medicaid	-.19	-.04	.05	-.29	.01	-.44	-.02
Medicare	-.11	-.07	--	-.03	-.18	-.40	.18
Private Insurance	-.33*	-.22	.05	-.27	-.09	-.61**	.07
Income	.07*	.01	.01	.02	.03	.03	.05
Medical Patient	.01	.04	.20	.29	.02	.15	-.12
White	-.10	.29*	-.22	-.24	.27	-.14	.04
Length of stay more than 6 days	.29*	.15	-.01	.31	.16	.17	.02
Intercept	-.00	.04	.05	.09	-.42	.44	-.18
N	551	643	316	212	580	380	338

NOTE: * $P \leq 0.05$
** $P \leq 0.01$

+ UNC_PROB = Patients who reported at least one or more communication problems

++ Education subgroups include: LTHS = less than high school; HSGRAD = high school graduate; LTCOLL = some college; and COLLGRD = college graduate or post-graduate.

Table 5.9
Linear Regressions Predicting Patients' Reports of the *Quantity* of Communication Problems Based on Age and Education Subsamples

UNC_TOT+	AGE SUBGROUPS			EDUCATION SUBGROUPS++			
Patient Characteristics	18-40 yrs	41-64 yrs	65 + yrs	LTHS	HSGRAD	LTCOLL	COLLGRD
18-40 years of age	--	--	--	.70*	.29	.33	.21
65 years and older	--	--	--	-.32	-.48	-.70	-1.57**
Less than high school	- .22	-.87**	- .25	--	--	--	--
High school graduate	- .25	-.52**	- .25	--	--	--	--
Some college	- .13	- .42	- .18	--	--	--	--
Health Status	- .25**	- .31***	- .22***	-.31**	-.14	-.37****	-.39**
Medicaid	- .55	- .23	- .59	- .37	- .58	- 1.00	.87
Medicare	.63	- .22	--	.08	- .38	- .72	1.45
Private Insurance	- .56	- .65*	.08	- .11	- .49	- 1.33***	.38
Income	.06	- .06	- .13	- .12	- .02	.05	- .09
Medical Patient	.36*	.33*	.54	.51*	.45**	.41*	.14
White	- .22	.59**	.33	.01	.58**	- .12	- .35
Length of stay more than 6 days	.06	.03	.07	.27	.16	.07	- .23
Constant	2.85	2.94	1.68	2.20***	1.54***	3.46***	3.27**
N	551	643	316	212	580	380	338
R-squared	.05	.09	.09	.13	.05	.13	.09
F	2.73**	5.43***	3.17***	2.94**	3.37***	5.34***	3.32***

NOTE: * $P \leq 0.05$
** $P \leq 0.01$
*** $P \leq 0.001$

+ UNC_TOT = Total problem score (ranging from 0 - 10)

++ Education subgroups include: LTHS = less than high school; HSGRAD = high school graduate; LTCOLL = some college; and COLLGRD = college graduate or post-graduate.

Table 5.10
Linear Regressions Predicting Patients' Reports of the *Quantity* of Communication Problems Based on Age and Education Subsamples

UNC_SCOR+	AGE SUBGROUPS			EDUCATION SUBGROUPS++			
Patient Characteristics	18-40 yrs	41-64 yrs	65 + yrs	LTHS	HSGRAD	LTCOLL	COLLGRD
18-40 years of age	--	--	--	.96*	.23	.35	.18
65 years and older	--	--	--	.56	-.88*	-.92	-1.82**
Less than high school	-.22	-1.13**	-.66	--	--	--	--
High school graduate	-.26	-.46	-.36	--	--	--	--
Some college	-.16	-.48	-.36	--	--	--	--
Health Status	-.19	-.21	-.09	-.24	-.02	-.30*	-.34*
Medicaid	-.53	-.62	-1.05	-.63	-1.04*	-.65	2.19
Medicare	1.61**	-.42	--	.05	-.26	-.04	1.17
Private Insurance	-.20	-.86*	.01	-.19	-.57	-.55	-.09
Income	-.01	-.03	-.17	-.07	-.07	.05	-.15
Medical Patient	.76**	.71**	.63**	.48	.91***	.52	.71
White	-.02	.26	.89*	.44	.35	.10	-.63
Length of stay more than 6 days	.44	-.05	.20	.03	.12	-.32	-.27
Constant	3.60***	3.97***	1.97**	2.62**	2.65***	3.54***	5.03**
N	309	337	153	116	303	197	183
R-squared	.09	.08	.12	.14	.08	.09	.15
F	2.66**	2.56**	1.92*	1.75	2.60**	1.91*	2.96**

NOTE: * $P \leq 0.05$
** $P \leq 0.01$
*** $P \leq 0.001$

+ UNC_SCOR = Total problem score (ranging 1 - 10), excluding zero values

++ Education subgroups include: LTHS = less than high school; HSGRAD = high school graduate; LTCOLL = some college; and COLLGRD = college graduate or post-graduate.

As mentioned in Chapter 4, it was postulated that confounding factors would likely occur between patients' health status and patients' age and educational attainment. One of the most consistent findings from the multivariate analyses is that health status achieved statistical significance across all regression equations based on the *quantity* of communication problems reported by patients. Table 5.9 demonstrates a strong association between patients' health status and total problems (UNC_TOT) across all three age subgroups. Middle-aged and older-age patients who reported worse health were likely to report at least one or more communication problems (e.g., UNC_PROB) compared to their counterparts who reported better health (Table 5.8). These findings are consonant with significant associations between health status and patients' reports of problems reported by Cleary and colleagues (1991, 1988).

Finally, the disaggregated samples showed that there was a strong association between whether patients received medical or surgical services and patients' problems (UNC_SCOR), across all three age subsamples (see Table 5.10). These findings indicated that medical patients were more likely to report communication problems regardless of age.

As mentioned in Chapter 4, it was predicted that insurance source and patient characteristics would likely have a moderating effect on patients' reports of communication problems. Findings from the regression analyses show that private insurance was a statistically significant indicator of patients' reports of communication problems (UNC_TOT). Patients with private insurance were likely to report fewer communication problems than those who had no insurance, who presumably had less access to care and less overall experience with the health care system. Analyses of subsets of the patient population found that private insurance achieved statistical significance in two subgroups. Among

middle-aged patients, those who had private insurance were likely to report fewer communication problems than their counterparts who had no insurance. Likewise, among patients with some college education, those who had private insurance were likely to report fewer communication problems than their counterparts who had no insurance. These findings suggest that patients with better access to care, measured by private insurance, are especially likely to report fewer problems if patients are middle-aged and have some college education.

In relation to regression equations based on the UNC_TOT dependent variable, subgroups of patients who were middle aged revealed that being white was associated with more total problems than non-white patients ($P<.01$). Also, among the subgroup of high school graduates it was found that being white was related to more total problems than non-white patients ($P<.01$). By examining only those patients who reported problems, using the UNC_SCOR dependent variable, data indicated that among the older subgroup of patients being white was associated with more total problems than non-white patients.

Although these regression equations indicated that patients' age was strongly associated with patients' reports of the *quantity* of communication problems, the regression models using the total problem score (UNC_TOT) accounted for a relatively small variance (e.g., 5 to 13 percent) in patients' reports of communication problems. This suggests that other factors are related to the rate at which patients report problems with the communication of information with their providers. In summary, the multivariate findings indicated that patients' reports of the *quantity* of communication problems were significantly associated with patients' age and other variables. The regression coefficients were useful to assess the relative degree to which each independent variable accounted for the variance in patients' reports of problems.

As discussed above, disaggregated analyses were conducted to determine the differential impact of patients' age and education on the dependent variable in different subgroups. The regression coefficients from analyses of different subgroups of the patient population allowed an opportunity to inspect for interaction effects between patients' age, education, and other explanatory variables. For instance, disaggregation of the age variable showed no direct estimate of effect of age in the age equation. Thus, the only way to estimate the effect of age was to calculate the predicted value of the dependent variable, holding constant the other independent variables.

The next phase of this research takes the multivariate analysis one step further by exploring the magnitude of difference between two distinct groups (1) younger patients compared to middle-aged patients, and (2) older patients compared to middle-aged patients. To discern the magnitude of the similarities and differences between these two groups, predictive values were calculated for each age subgroup. The regression coefficients from the disaggregated UNC_TOT equation were used to calculate the predicted values, presented in Table 5.9. As illustrated below, the predictive values were a product of an equation in which the regression coefficient for each explanatory variable was multiplied by its designated value.

Predicted value = (-.22 * 0) + (-.25 * 1) + (-.13 * 0) + (-.25 * 3) + (-.56 * 1) ..... + 2.85.

To calculate the predictive values, there were two ways to specify values for the independent variables. First, independent variables would assume mean values. Second, there would be designation of a "standard" case, which would be used for comparison

purposes with alternate values of the independent variables. The standard case included all independent variables with values corresponding to the following situations: high school graduate, good health status, private insurance, middle income, medical patient, white, and length of stay less than six days. In separate equations, each independent variable in the standard case was substituted with an alternative. For example, high school graduate was replaced with less than high school or college graduate; good health status was replaced with poor or excellent health; private insurance with uninsured, medical with surgical patient, white with non-white. In both approaches, the predicted values were used to illustrate the differences between two comparison age groups: (1) younger and middle-aged patients, and (2) older and middle-aged patients. Table 5.11 presents the calculated predictive values of patients' reports of problems, reflecting both standard cases and alternative cases, compared the regression coefficients from the aggregate UNC_TOT equation (presented in Table 5.7). As shown below, the predicted values differ based upon the values of each independent variable. The following discussion focuses on predicted values for the education and health variables, which were statistically significant in regression equations, displayed in Table 5.9.

Concerning the standard case, the predictive values show that younger age patients who were high school graduates have .39 more problems than their middle-aged counterparts. In contrast, older-age patients who were high school graduates have .46 *fewer* problems than their middle-aged counterparts. For comparison purposes, the alternate cases explored predictive values for patients with less than high school education and college graduates. Among those with less than high school education, younger-age patients had .77 more problems and older patients had 1.16 more problems than their middle-aged counterparts. Finally, among college graduates, younger-age patients had only .12 more problems and

In summary, the regression equations relying on disaggregated data of the 1993 National Patient Survey explained approximately 3 to 13 percent of the variance in patients' reports of *types* of communication problems. While the findings from the multivariate analyses generally demonstrated that young age was associated with the type of communication problems related to Factor 1, there are unanswered concerns about whether younger and older patients were likely to report problems with the same or different items of the Uncertainty Scale. Descriptive analyses were used to investigate the third research hypothesis to identify the most common and least common communication problems and determine whether age or education influenced the kinds of problems reported by patients. The third research hypothesis postulated that younger and older patients were likely to report different types of communication problems.

Descriptive analyses of patients' reports of communication problems revealed that some communication problems were more common than others. The following list presents the most-common to least-common communication problems. These findings are fairly consistent across the patient population, analyzed by aggregate samples and disaggregated samples based on age and education subgroups.

As illustrated below, the most common information problem was "not enough information on the side effects of medications," totaling 394 patients (nearly 30 percent) among the total sample of 1325, which totaled all cases with no missing values for items of the Uncertainty Scale. The simple ranking above, however, does not reveal whether or not this problem was more common among younger or older groups of patients.

Table 5.15
Communication Problems Rank Ordered by Most Common to Least Common

Rank Order	Item of the Uncertainty Scale	Variable
1.	Patient not given information on important side effects of medications	UNC_5
2.	Patient not given information on resuming usual activities (e.g. work)	UNC_8
3.	Patient not given information on danger signs about illness after discharge	UNC_7
4.	Patient believed doctors or nurses gave conflicting information	UNC_4
5.	Patient received no understandable explanations of the results of tests	UNC_10
6.	Patient did not get understandable answers to questions from nurse	UNC_2
7.	Patient received no understandable explanations of purpose of medical tests	UNC_9
8.*	Patient not given all the information needed to help recover after illness	UNC_6
9.*	Patient did not get understandable answers to questions from doctor	UNC_1
10.	Patient believed that doctors or nurses withheld information	UNC_3

NOTE: * = tie order

Table 5.16 presents the individual components of the Uncertainty Scale by subsets of the patient population based on differences in age and education. Analyses of subsets of the patient population reveal that concerns about the side effects of medications are universal across age and education subgroups. That is, the most common problem among all patients -- regardless of age or education level -- concerned the adequacy of information related to the side effects of medications. Roughly 30 percent of all patients in all different age and education subgroups reported problems with the acquisition of this information.

Medication use may be a confusing matter for patients. Patients may have several important questions related to their medication use, in addition to knowing the side effects of medication. For example, if patients do experience side effects, what action should they take? Should they be concerned about drug interactions with other prescription or non-prescription drugs? How often and how long should medication be taken? Should patients avoid certain foods or beverages while taking medications? These related questions are important considerations, which emphasize the need for patient education and effective

communication between patients and providers. Communicating advice and directions to patients is a crucial component of good medical care. Doctors, themselves, recognize that they may not provide patients with enough information on prescribed medications and their side effects (Jones, Kreps, and Phillips 1995). Consequently, many patients rely on computerized instruction sheets from pharmacists to be informed about dangerous side effects of their medications and to learn about possible harmful interactions that their new prescription medication may have with other medications.

The second most common communication problem, cited by 247 patients, was information on when they could "resume usual activities." This specific problem highlights patients' desire for information on how soon they may expect to recover from their medical condition and return to their usual daily routines after hospital discharge, such as employment, driving a car, or resuming physical exercise. These concerns may be paramount to some patients, who may have limited sick leave from their employment or others who simply want to reestablish their self-sufficiency and want to recover rapidly from their illness.

Table 5.16
Patients' Most Common to Least Common Communication Problems Based on Subsamples of Patients' Age and Education Subgroups

		AGE SUBGROUPS			EDUCATION SUBGROUPS				
Variable	Items of the Uncertainty Scale	18-40 yrs	41-64 yrs	65 + yrs	Less than high school	High school graduate	Less than college	College graduate	TOTAL
UNC_1	Patient did not get understandable answers to questions from doctor	8*	9	8	7	8*	8	9	9*
UNC_2	Patient did not get understandable answers to questions from nurse	5	6	5*	6	6	7	5	6
UNC_3	Patient believed that doctors or nurses withheld information	10	10	10	8	10	10	10	10
UNC_4	Patient believed doctors or nurses gave conflicting information	2	4	7**	4	4	4	4	4
UNC_5	Patient not given information on side effects of medications	1	1	1	1	1	1	1	1
UNC_6	Patient not given all the information needed to help recover after discharge	7*	8	9	10	7	9	6	8*
UNC_7	Patient not given information on danger signs after hospital discharge	4	3	2	3	3	3	2	3
UNC_8	Patient not given information on resuming usual activities after discharge	3	2	3	2	2	2	3	2
UNC_9	Patient received no understandable explanations of purpose of medical tests	9	7	6**	9	9*	6	8	7
UNC_10	Patient received no understandable explanations of the results of tests	6	5	4*	5	5	5	7	5

NOTE: * = tie order

N = 1,321 excluding all cases with missing values

The third most common problem, cited by 234 patients, concerned not enough information on "danger signals to watch for after hospital discharge." Again, patients are interested in knowing what to expect after hospital discharge. They want to be aware of the possibilities of medical complications and the need for follow-up care and treatment. Analyses of subsets of the patient population reveal that concerns about the danger signs after hospital discharge are universal across age and education subgroups.

The fourth most common communication problem was "conflicting information" from providers. There were 201 patients who responded affirmatively that "while one doctor or nurse would say one thing, another would say something quite different." It has been demonstrated that suboptimal communication undermines the overall quality of care. Contradictory or conflicting information may be an important contributing factor of suboptimal communication between patients and providers. It may be speculated that patients who do not fully understand their illness are less likely to follow or pursue appropriate post-hospital treatment and adhere to medical regimens, such as proper medication use.

Approximately 115 patients, totaling 9 percent of the total sample, reported communication problems with the remaining items of the Uncertainty Scale. These communication issues include information about test results, why tests were done, understandable answers to questions from both physicians and nurses, and information patients needed to help them recover after hospital discharge. One of the least common communication problems cited was that patients believed that the physicians or nurses were withholding information from them.

These findings suggest that patients tend to report more problems with general issues related to recuperation after hospital discharge. For instance, patients want to know the

immediate effects of their post-hospital period, including side effects of medications, resuming usual activities, and danger signs to watch for during their post-hospital recovery period. Thus, it may be argued that patients desire comprehensive information to help them cope with their illness and to recover quickly from their illness or surgical procedure. Such problems are among the most common communication problems of the Uncertainty Scale.

Suboptimal communication, such as receiving contradictory or conflicting information from physicians and nurses often confuses patients about their medical condition. However, analyses of subsets of the population revealed that younger patients were likely to report more problems with conflicting information than older patients. One possible explanation for this finding is that younger patients have less experience with inpatient services than older patients. Another explanation is that younger patients may ask the same question to more than one provider and, thus, receive different responses. Nonetheless, it is speculated that prior experience as a hospital patient may alleviate some of the anxiety and uncertainty associated during the hospitalization. First-time hospital patients may have more stress during their hospitalization partly because they may not know what to expect during their hospital stay compared to previously-hospitalized patients.
Table 5.17 confirms prior evidence that patients who were likely to report suboptimal communication were likely to report problems with information on medications side effects (UNC_5) and information on danger signs after hospital discharge (UNC_7).

Table 5.17
The Association Between Patients' Total Problems and Individual Items of the Uncertainty Scale

Variable	Items of the Uncertainty Scale	TOTAL AMOUNT OF COMMUNICATION PROBLEMS				
		1 problem	2 problems	3 or more problems	TOTAL	RANK ORDER+
		n (%)				
UNC_1	Patient did not get understandable answers to questions from doctor	8 (3)	7 (5)	92 (36)	107 (8)	9*
UNC_2	Patient did not get understandable answers to questions from nurse	21 (7)	15 (11)	104 (41)	140 (11)	6
UNC_3	Patient believed that doctors or nurses withheld information	3 (1)	13 (9)	78 (31)	94 (7)	10
UNC_4	Patient believed doctors or nurses gave conflicting information	39 (13)	39 (28)	123 (48)	201 (15)	4
UNC_5	Patient not given information on side effects of medications	113 (37)	84 (60)	197 (78)	394 (30)	1
UNC_6	Patient not given all the information needed to help recover after hospital discharge	2 (1)	8 (6)	100 (39)	110 (8)	8*
UNC_7	Patient not given information on danger signs after hospital discharge	25 (8)	50 (36)	158 (62)	234 (18)	3
UNC_8	Patient not given information on resuming usual activities after discharge (e.g., work)	77 (25)	43 (31)	127 (50)	247 (19)	2
UNC_9	Patient received no understandable explanations of purpose of medical tests	9 (3)	8 (6)	103 (41)	120 (9)	7
UNC_10	Patient received no understandable explanations of the results of tests	9 (3)	13 (9)	133 (52)	155 (12)	5
	TOTAL	306 23%	140 11%	254 19%	1325 100%	

NOTE: * = tie P<.000. Percentages represents column percent.
+ = rank order means that "1" is the most common problem and "10" is the least common problem.

DISCUSSION

The findings of the present study contribute modestly to our understanding of the patient-provider communication process from the patients' perspective. The results of this study support previous research indicating that patients differ in their perceptions of the quality of their care based on their sociodemographic characteristics (Cleary 1991; Street 1991; Waitzkin 1985; Stewart 1983; Haug 1981; Pendleton and Bochner 1980). Three research hypotheses were posed about how patient characteristics were associated with perceptions of the quantity and type of communication problems. This study also explored the interaction of patients' age and education with reports of communication problems. Patients' reports of suboptimal communication give an opportunity to understand better the characteristics of patients who are likely to report problems with their care and to direct efforts to improve patient-provider communication. This study provides evidence that patients' age and education influence their perceptions of their care. The effects of these characteristics on patients' reports of communication problems are discussed below.

Age

This study found that age was a significant indicator of patients' reports of communication problems. Results from the multivariate analyses found that younger patients are likely to report more communication problems than older patients. These findings are consistent with other researchers (Charles 1994; Cleary 1991) who found that younger patients reported more problems with a range of interpersonal aspects of care than older patients. There are several possible explanations for these findings. First, younger patients may have higher expectations of the quality of care than older patients. Such expectations

may relate to the influence of the consumer movements of the last two decades. It may be speculated that younger and older patients share different attitudes and expectations of the patient-provider relationship, measured by patient involvement and participation in medical decisions. Consumerist attitudes prevalent in recent years may have had a differential impact on younger than older patients. That is, consumer advocacy efforts may significantly relate to younger patients' demand for active involvement in their care. Consequently, younger patients may be less satisfied with their care when their expectations or preferences for care are not met.

A second explanation may be that younger patients may be less accustomed to information anxiety and uncertainty about their medical condition and treatment than older patients. As emphasized in Chapter 3, theories of human development indicate some of the ways in which young adults may differ from older adults according to life span experiences. These theories suggest that younger patients may need more reassurance about their care and guidance about involvement and participation in medical decisions. Moreover, it is possible that younger patients may have shorter tenured relationships with their providers compared to older patients. Thus, stable long-term relationships with providers may relate to patients' expectations and information-seeking behaviors during the medical encounter. This study hypothesized that younger patients are likely to have more concerns about medical information as a means to reduce their information anxiety compared to older patients who may be more accustomed to the experience of illness and may have longer tenured relationships with their providers, who may provide the needed reassurance about their care.

A third explanation may be that prior experience with inpatient services is likely to influence patients' reports of communication problems. As discussed in Chapter 3, the

hospital environment may be a confusing place for many patients. Some patients may find it very frustrating and difficult to get the full undivided attention of their physicians or nurses to answer their questions and concerns. It may be hypothesized that patients who are unfamiliar with the daily routines of hospitals may be more likely to report problems with their care.

Furthermore, it may be hypothesized that some patients are likely to have more social support than others during their hospital stay. It may be speculated that the effect of companions, caretakers, and family members may increase patients' understanding of medical information. It is possible that such persons may act as an important intermediary and communicate with providers on the patient's behalf to clarify issues that are unclear. Beisecker (1989) suggests that companions assume a significant caretaking role to elderly patients by serving several functions such as "watchdog, significant other, and surrogate patient" (p. 55). One of the limitations of the present study is that it did not examine the effect of family or social support on patients' of communication problems.

Finally, the present study was unable to determine whether providers responded differently to patients concerning information about their medical condition as a function of the patient's age. For instance, one of the possible reasons that older patients reported fewer communication problems is that providers spent more time explaining information or conversing with them about their medical care. An important shortcoming of the present study is that it was unable to determine whether providers varied their communication styles based on the age of the patient. Thus, future research should seek to determine whether providers are less responsive with younger than older patients. Moreover, another limitation of the present study is that it was unable to determine whether patients were treated differently or merely perceived the quality of their care differently.

Education

Several investigators have indicated that socioeconomic status is a significant indicator in the treatment of patients and their health care outcomes (Peterson et al. 1994; Epstein et al. 1990; and Haas et al. 1985). As noted earlier, educational attainment has been used as an indicator of socioeconomic status because education is often related to employment opportunities and income. Ross and Wu (1996) suggest that educational attainment is likely to be associated with access to resources such as household income, social support, and health behaviors (e.g., health promotion and disease prevention activities including physical exercise and avoidance of substance abuse).

One of the ways educational attainment may influence patients' perceptions of the quality of their care is through access to information resources. The present study found a significant positive main effect of patients' education on their reports of communication problems (Table 5.7). There are a variety of possible explanations that patients who were college graduates were likely to report more communication problems than less-educated patients. For instance, college graduates may have higher expectations of their care, as well as more awareness or knowledge about a wide range of information about their health or medical condition, which may encourage them to ask more questions about their care or engage in more detailed discussions of their care than less-educated patients. One important shortcoming of the present study was that it lacked data on the amount of questions asked by patients and whether providers responded differently to patients of different ages, educational attainment, or socioeconomic status.

Nonetheless, findings from the present study indicate that educational attainment was a significant indicator of patients' reports of communication problems. In the aggregate sample of patients' total problem score, patients with high school education or less were likely to report fewer communication problems than patients who were college graduates ($P<.01$). There are several possible explanations for this finding. It is speculated that less-educated patients are likely to report fewer problems because they may not want to complain about their care. For instance, they may hesitate to admit ignorance of their medical problems because there may feel shame, self-blame, or embarrassment, and furthermore may not want to be labeled "stupid" because they did not take care of their health or properly monitor their medical condition, which may have averted the need for their hospitalization.

The literature suggests that education is related to patients' perceptions of the quality of their care and their involvement in decisions about their care. As noted previously, there is ample evidence that less-educated patients are more likely than more-educated patients to ask fewer questions about their care (Pendleton and Bochner 1980; Waitzkin 1985). Patients' information-seeking behavior may relate to personal attitudes concerning health professionals. As discussed previously, patients who perceive that they have limited access to care may be more satisfied and express more gratitude about the services they receive from the health care system. Such beliefs may be more common among patients with low socioeconomic status than patients with good routine access to medical care. Such attitudes may relate to the gap in social distance between patients and providers based on differences in educational attainment (Bochner 1983). The "halo effect" may explain why less-educated patients are likely to report higher satisfaction with their care, despite cause for concern about the quality of their care. Thus, it may be speculated that patients of low socioeconomic status

may be reluctant to report problems with the quality of care because social class differences exist between them and their physicians or nurses.

Additional findings from this study indicate that the interaction between patients' age and education has a significant effect on patients' reports of communication problems. Table 5.9 demonstrates that patients with less than high school education who are younger (18-40 years of age) are likely to report more communication problems than their counterparts who are older ($P<.05$). Specifically, younger patients with less than high school education are likely to report .77 more communication problems than their middle-aged counterparts (Table 5.11). This finding highlights the possibility that younger and less-educated patients may be more willing to complain about the quality of their care than their middle-aged counterparts. As discussed previously, age may be considered a significant indicator of patients' reports of problems with their care. Again, it is hypothesized that younger patients are likely to have higher expectations of their care and may have more concerns about information uncertainty, which relate to patients reports of problems with their care.

Another significant finding from the multivariate analyses is that among college graduates, older patients were likely to report fewer communication problems (measured by the total problem score, UNC_TOT) than their younger counterparts ($P<.01$). This finding supports previous hypotheses that older patients would report fewer problems with their care. As emphasized above, there are several possible explanations for this finding relating to patients' experience with illness, in particular, and the health care system, in general, as well as personal expectations, and information-seeking behaviors.

Health Status

One of the most robust findings of the present research was a strong association between patients' health status and their reports of communication problems. Patients who reported their health as poor were likely to report more communication problems than patients who reported their health as excellent. These findings are consistent with those Cleary and colleagues (1991, 1988), who found strong evidence that patients' health status and reports of communication problems were interrelated. There are numerous explanations for these findings. For instance, sicker patients are likely to report more problems with their care because they may not be satisfied with their health status and recovery period. Because patients who report their health as poor have an increased likelihood to experience pain and physical discomfort than healthier patients, they are likely to be more critical of their care. Also, patients who report poor health may have more opportunities to encounter difficulties related to communication of information than patients who are in better health and have shorter experiences with inpatient services.

Perceptions of the quality of interpersonal communication may be confounded by health status and patients' attitudes about the communicative style of providers. For instance, patients' reports of communication problems may relate to their perceptions of how well providers responded to their emotional and psychosocial needs and whether providers showed empathy for their concerns. Additionally, patients' reports of communication problems may be related to whether or not patients' experienced pain and discomfort during their hospitalization or recovery period, which may strongly influence their perceptions about how well providers responded to their various needs and preferences for care.

Finally, findings from the present research show that health status is a significant indicator of patients' reports of communication problems. However, disaggregated regression analyses found that health status did not vary significantly across age or education subgroups. In sum, health status is associated with patients' reports of communication problems, irrespective of patients' age and education.

Medical Patients

In the aggregate and selected subsets of the patient population, medical patients were likely to report more total problems than surgical patients. There may be several possible explanations for this finding. For instance, this finding may indicate the severity of illness of medical patients, who may require more tests to diagnose their illness, all of which may contribute to patients' level of uncertainty about their health and well-being.

In contrast, surgical patients appear to report fewer communication problems. This finding may relate to the fact that surgical patients tend to undergo specified procedures to address their medical problems and may expect a cure to their medical ills. There may be less overall ambiguity associated with surgical procedures compared to most medical diagnostic tests and medication therapies. Thus, surgical patients may have more clearly defined treatment for their illness than medical patients, who may encounter more diagnostic tests, medication therapies, and more uncertainty related to their medical condition.

The present study found that medical patients, by virtue of their health status, are likely to report more communication problems than surgical patients across age groups. Findings from subsets of the patient population indicate that younger and middle-aged patients who received medical services were likely to report more problems than their

counterparts who received surgical services. As cited above, younger and middle-aged patients may have less overall experience with inpatient services than their older counterparts. This inexperience with hospital routines may be more complex for medical patients than surgical patients because of the specified diagnosis and treatment plans for both sets of patients.

CONCLUSIONS

The purpose of the dissertation was to examine hospital patients' perceptions of interpersonal communication with their providers and identify the characteristics of patients who were likely to report communication problems. In particular, this research investigated the confounding effect of patients' age and education on patients' reports of communication problems as a means to identify patients who were likely to be vulnerable to suboptimal communication. Lastly, this investigation assumed that patients' acquisition of information would likely reduce uncertainty and anxiety associated with the illness experience. One of the major findings of this research was that younger patients tend to report more communication problems than older patients. Specifically, younger patients who have less than high school education are likely to report more communication problems than their older counterparts. Concerning the types of communication problems reported, younger-age patients are likely to report more problems with conflicting or contradictory information from their providers than older-age patients.

Another interesting finding from this investigation is that patients who were high school graduates and those with less than high school education were likely to report fewer communication problems than college graduates. One possible conclusion is that less

education influences patients' information-seeking behaviors. This hypothesis is supported by empirical evidence that less-educated patients tend to ask fewer questions than better-educated patients. Because some may assume that physicians or nurse provide complete information about the patient's medical condition and treatment, important issues may not have been discussed during the medical encounter. For instance, patients may fail to obtain adequate information on the risks and benefits of medical procedures and treatment options, the harmful side effects of medications, and information on resuming usual activities after hospital discharge. It may be hypothesized that the way in which patients define their health and cope with their illness is determined by the type and amount of information they received from their providers.

Access to information: A Micropolitical Situation

In the health care setting, providers are the "gatekeepers" of information; they may decide to communicate some information and withhold other information. Thus, information is communicated to patients based on a filtering of information through providers' individual perspective or personal bias. Subjectively, providers decide from a vast arena of information and medical knowledge, the type and amount of information to share with patients, thus, subtly shaping patients' understanding of their diagnosis, prognosis, and treatment options. Physicians tend to control the flow of information during the medical encounter, by typically asking more questions and offering fewer explanations about patients' medical diagnosis, prognosis, and treatment options. Therefore, it is clear that providers have a special advantage in patient-provider relationships by having the power to control the flow of information.

It should be acknowledged that some providers may not be particularly motivated to give full information to patients. There is well-established evidence of physicians' communication styles that incorporate highly technical language or unfamiliar medical terminology may present barriers to effective communication. For instance, patients often have difficulty understanding medical jargon. Through communication, physicians have been known to distance themselves personally from the specific problems of their patients. This notion is particularly relevant in the instance in which patients deal with difficult end-of-life decisions, in which there is little hope that further medical care will alleviate the patient's terminal prognosis. Some physicians may not want to encounter the limitations of medicine to cure all patients of their ills and that the physician cannot save the patient from his or her eventual death. Some physicians have difficulty discussing patients' personal concerns about their health and illness, and thus, take little time talking with patients. Some physicians may believe that they have been defeated by unrelenting illness and have difficulty admitting to patients that there is nothing more they can do to help the patient, other than pain management issues. Additionally, physicians often lack adequate interpersonal communication skills (Kreps 1988). Thus, efforts to improve the quality of care must incorporate training for physicians and medical students in humanistic skills, particularly interpersonal communication.

Common societal beliefs suggest that information and knowledge are powerful resources. Understanding information is empowering; it may assist patients to regain control of their health and illness experience. Yet, more information may not translate into deeper understanding of issues; an overload of information may create confusion and dilemmas about making choices among a variety of options. Thus, one of the fundamental issues

underlying this dissertation is that patients need to be critical consumers of the information they receive about their illness and medical treatment. The implications for policy and research of the present study are discussed in Chapter 6.

CHAPTER 6

IMPLICATIONS FOR POLICY AND RESEARCH

INTRODUCTION

The interpersonal relationship between patient and provider is central to the quality of medical care. Findings from the 1993 National Patient Survey indicated that younger patients, medical patients, and those who report worse health status were particularly likely to report problems with interpersonal communication with their providers. The following sections provide a discussion of the implications of the research findings, strengths and weaknesses of the study, and recommendations for future research.

POLICY IMPLICATIONS OF RESEARCH FINDINGS

Rapid changes in the health care system on the quality of care have drawn increased attention from policymakers, legislators, providers, and patients. Many are concerned that cost-containment measures, resulting in decreased time providers spend with patients, may compromise relationships between patients and providers. Because of concerns about the quality of health care, President Clinton announced in September 1996 the formation of a new National Commission on Health Care Quality.

There appears to have been a popular "call to action" to hold health plans accountable for health care quality. For instance, several states have passed legislation to

curtail practices of particular health plans (e.g., "gag clauses") that deny patients information about various treatment options and access to expensive medical treatments or specialty care. Additionally, in response to extensive public concern, Congress enacted legislation requiring minimum lengths-of-stay for childbirth.

One of the major findings of this study is that many patients may not be properly prepared to leave the hospital, based on patient reports of the most common communication problems. For instance, many patients reported problems with insufficient information about the side effects of medications, resuming usual activities, and danger signals to watch for after hospital discharge. These communication problems have particular policy relevance given recent trends toward early hospital discharge. Although they may receive excellent and cost-effective technical care, patients may not have good health care outcomes if they do not fully understand how to manage their illness or recovery after hospital discharge.

Nearly one out of three patients (30 percent) in this study, regardless of age or education level, reported problems with obtaining information about the side effects of medications. Nearly one out of five patients (20 percent) reported that they did not receive enough information on when they could resume usual activities after hospital discharge. Nearly one out of five patients (18 percent) reported that they did not receive enough information on danger signals to watch for after hospital discharge. These communication concerns are important because patients may leave the hospital with many unanswered questions and be poorly prepared to deal with their illness and recovery process.

In multivariate analyses, patients who received medical services were more likely than patients who received surgical services to report communication problems related to discharge planning (e.g., information on the side effects of medications, resuming usual

activities, danger signs after hospital discharge, and other information needed to help them recover successfully after hospital discharge) ($P \leq .001$). As emphasized in Chapter 5, there are several explanations why more medical patients than surgical patients reported more communication problems. Medical patients may experience more acute illness, sudden onset of illness, or complex or chronic medical conditions. In contrast, surgical patients are more likely to have scheduled their procedures (e.g., elective procedures) and may have more opportunity to learn about their surgery and what to expect after hospital discharge. This study suggests that patients who lack a good understanding of their diagnosis, prognosis, or treatment are more likely to report problems with the quality of their care – measured by patients' reports of communication problems – than other patients.

In the multivariate analyses, age was a significant predicator of patient reports of communication problems. This study revealed that younger age was associated with more problems and that older age was associated with fewer communication problems. Age was a stronger determinant of patients' reports of the quality of their interpersonal care than gender, race, income, and even, education. This finding is consistent with prior empirical research on differences in patients' perceptions of their care based on sociodemographic characteristics. Previous research highlights that younger patients generally favor more information, involvement, and choice in medical decision making than that of persons of previous generations. In general, studies have shown that younger patients are less satisfied with their care than older patients. Higher expectations among younger and middle-aged persons concerning the quality of medical care for themselves and for their aging parents will certainly have an influence on ways in which the health care system responds to consumers' demands.

Health care policy should acknowledge the importance of good interpersonal relationships between patients and providers. Through continuous quality improvement methods, hospitals could incorporate patients' reports of problems with their care as a source of information about quality.

To effectively address patients' information needs, hospitals and providers could adopt four strategies. First, providers should consider whether patients should receive standardized information to ensure that all patients receive full and complete information. This is particularly important given findings from the present study that suggest that younger patients and medical patients are more likely to report problems with the communication of information. Therefore, providers should focus special attention on such patients to ensure that their information needs are met. Most importantly, before patients are discharged, providers need to ensure that all patients receive comprehensive information, verbally and in the form of written educational materials, which patients may also review after hospital discharge. Other educational tools including videotapes, audiotapes, and clear and concise written instructions would help patients to cope with their illness and recovery after hospital discharge.

Second, hospitals could invest resources in staffing a telephone help-line, offered 24 hours a day, seven days a week to answer patients' questions about their health or illness. Doctors should call patients at home, following hospital discharge, to check on their health status and respond to patients' questions. Also, it would be useful for nurses to make follow-up telephone calls to patients after hospital discharge to determine how well they are coping with their illness and recovery. This would provide patients an opportunity to ask questions about their care or treatment that they did not ask at the time of their discharge from the

hospital. This type of service is important as patients increasingly are discharged from the hospital after a short stay or released from the hospital a few short hours after their surgery. Providing professional advice via telephone may be effective in addressing many patients' information needs and provide them with an important resource to deal with their questions or concerns, as well as provide timely advice or intervention if medical complications should arise.

Third, hospitals could invest resources in a user-friendly library and information resource center for patient education purposes. For instance, Boston's Beth Israel Hospital has established an information resource center where patients, family members, and others have an opportunity to learn about medical diagnoses, prognoses, and treatment options by using a wide range of books, magazines, videotapes, and computer information services. Empowering patients with information -- whether through hospital resource centers or via follow-up phone calls -- may increase patients' knowledge and understanding of their medical condition and translate into better health care outcomes and greater patient satisfaction. Moreover, patients' knowledge of their illness may provide them with a sense of control over their medical problem and increase their overall sense of well-being by understanding their diagnosis, prognosis, and treatment.

Lastly, hospitals and providers could ensure that discharge planning information includes comprehensive information on prescription medications (e.g., when to take pills, side effects of medications, and possible interactions with other medications), danger signs after hospital discharge (e.g., warnings for medical complications that require medical attention), and a layperson's glossary of commonly-used medical terms in relation to their illness or treatment plan. Too often, patients do not fully understand their medical condition

or treatment because providers use unfamiliar medical terms and jargon. To overcome barriers in communication between patients and providers, patients' should have access to a layperson's glossary of medical terms and providers should make concerted efforts to communicate medical information in a way that patients are able to clearly understand it.

Uncertainty about one's health or illness, brought on by inadequate information, may be disconcerting to many patients. One of the consequences of being poorly informed about one's medical condition is the risk of poor health, delayed recovery, and unintended consequences of prolonged illness. Such problems could be prevented through more effective communication about recognizing the danger signals after hospital discharge and the need for follow-up care. In the aggregate, patients' prolonged experiences with illness can pose an economic toll to the country in terms of preventable hospitalizations and unnecessary medical procedures. Additionally, indirect health care costs may include lost productivity, measured by workers' sick days.

IMPLICATIONS FOR HEALTH SERVICES RESEARCH

The present study also has implications for health services research. First, this study demonstrates that differences in patients' reports of the quality of their care are related to selected sociodemographic characteristics (e.g., age and education). Investigators should continue research efforts to determine the best methods to measure outcomes of care (e.g., patient satisfaction) as well as ways to adjust for aspects of case mix, including sociodemographic characteristics that may vary across providers and plans. Further research is needed to determine whether health plans should adjust for sociodemographic characteristics such as age.

Patients' reports about their care can be used to improve patient outcomes. Much research has already demonstrated the link between interpersonal relations between patients and their providers on health care outcomes (Kaplan et al. 1989, 1985). The present study relates to four areas of research:

- measure interpersonal aspects of care that are important to patients;
- establish the link between interpersonal communication and patient outcomes;
- improve communication between patient and providers; and
- incorporate patients' perspectives in choosing among different treatment options.

Measure Interpersonal Aspects Of Care That Are Important To Patients

Patients are very concerned with interpersonal aspects of care. As cited previously, several studies have concluded that patients' appear to be dissatisfied with the quality of their interpersonal interactions with providers. Often, dissatisfaction stems from one-sided communication, in which providers maintain primary control of the exchange of information. Such instances may not allow patients an opportunity to fully understand their medical condition or to help them to play an active role in getting well. Patients have expressed concerns that they want to establish and maintain open, two-way communication with their providers, and want to know that their providers truly care about them. Additionally, patients want to be informed about various treatment options, such as knowing the risks and benefits of medical procedures so that they can weigh their options carefully.

Various efforts are underway to provide consumers with information on choosing among different health plans and providers and to evaluate their health care. For instance, consumer "report cards" may provide information to help consumers evaluate different health

plans and individual physicians along a continuum of process and outcome measures. As suggested earlier, younger and older patients may have different information needs. Thus, further research is needed to identify the unique information needs of younger and older patients, and to identify various methods to communicate medical information to patients.

Before embarking on major initiatives to provide consumers with information on quality measurement and monitoring systems, it is first important to identify what types of information patients want to make informed decisions about choosing health plans, selecting physicians, and making decisions among different treatment options. To better understand patients' information needs and to improve the content, design, and availability of information to consumers, the Henry J. Kaiser Family Foundation and the federal Agency for Health Care Policy and Research have sponsored national conferences and research on this topic, including the development of a standardized consumer survey instrument to create national standards of consumer satisfaction and perceptions of the quality of care (Gaus and Fraser 1996).

A variety of efforts are underway to provide consumers with information on the quality of their health care. In late 1996, the National Committee for Quality Assurance (NCQA) released the latest version of the Health Plan Employer Data and Information Set (HEDIS), which provides information to both corporate and individual consumers to make informed decisions on choosing providers by evaluating comparative data on various outcome measures (e.g., preventive care, health outcomes). HEDIS was designed to measure the performance of health plans, not individual providers. In 1996, Massachusetts became one of the first states in the country to provide information to the public on physicians' educational background, professional associations, and involvement in malpractice litigation.

Establish The Link Between Interpersonal Communication And Patient Outcomes

Existing research has demonstrated that when patients are well informed about their medical condition -- such as what to expect about their illness after hospital discharge, or what danger signs to watch for and when they need to follow medical advice or instructions about follow-up care -- they are likely to have better health outcomes and a quicker recovery than patients who are less well informed. As mentioned in Chapter 2, there is ample evidence of the relation between interpersonal communication and health care outcomes (Kaplan et al. 1995, 1989), costly medical care (Roter 1977; Ware and Snyder 1975), medical malpractice litigation (Schwenk and Romano 1992; Annandale 1989), "doctor shopping" (Kasteler et al. 1976; Wolinsky and Steiber 1982), and noncompliance with medical advice (Becker 1985; Eraker et al. 1984; Hayes-Bautista 1976). Advising patients to assume a more active role in their care has had positive effects on health outcomes. Kaplan and Greenfield (1985) demonstrated that coaching patients to be actively involved in decisions about their care has had a dramatic effect on health outcomes, measured by blood glucose levels and diastolic blood pressure. Patient satisfaction and decisions to switch health care providers have been linked with the quality of interpersonal patient-provider relationships, measured by participatory decision-making and the amount of time physicians spend with patients (Kaplan et al. 1996).

Time spent with patients is a critical factor influencing communication between patients and their providers. The consequence of poor communication between patients and providers may be measured in different ways such as misunderstandings between patients and providers, misdiagnoses, inappropriate or unnecessary care. "When doctors spend more

time with patients, not only can they provide better care, but they can save the cost of unnecessary tests and interventions, which often inadequately and expensively replace communication" (Heymann 1995, p. 251). There is substantial evidence that engaging patients in dialogue about their medical condition and decisions about their care has an influence on their outcomes of care. Inadequately shared information may lead some patients to regret decisions about their medical care; they may lament retrospectively, "if I only knew then, what I know now."

If providers spend less time with patients, patients are unlikely to have sufficient opportunity to receive complete information about managing their medical condition, choosing among different treatment options (e.g., understanding the pros and cons of each option), and learning about appropriate follow-up care. Kaplan and colleagues (1996) suggest that cost-containment strategies that dictate the amount of time physicians spend with patients and impinge on physicians' clinical autonomy may threaten the quality of care and result in suboptimal patient outcomes. Thus, further research is needed to assess the impact of communication between patients and providers on the outcomes of care. Future studies should examine the information needs of patients, information resources available to patients, and whether the content of different types of information has an effect on patient outcomes.

Improve Communication Between Patients and Providers

Providers should adapt their communication styles to respond to patients' information needs. Providers need to build two-way rapport with patients in order to have more effective communication. One byproduct of effective communication is that patients may have increased trust or confidence in their medical care.

The abundance of information about health issues from traditional media such as newspapers, television, and magazines, as well as Internet and online computer services are contributing to a dramatic shift in the traditional role of patients in decisions about their medical care. Many patients have knowledge from diverse information sources and are ready to take an active role in their own care, which has traditionally been in the hands of physicians and insurers. During the past decade, it appears that patients' expectations of their care has increased as information about medical technology and diagnostic tools have become more available to the lay public. Thus, providers may need to reserve more time in their schedules to respond more fully to patients' information needs.

Incorporate Patients' Perspectives In Choosing Among Different Treatment Options

One way to help patients to understand their medical condition and the advantages and disadvantages of particular treatment options is through interactive computer and video programs, such as those developed by John Wennberg, M.D., and researchers at Dartmouth College (1988). The aim of such work is to help patients to make appropriate choices among different medical treatment options, which incorporate patients' personal values and preferences to evaluate the possible risks and benefits of alternative therapies.

The way in which information is presented to patients may influence patients' preferences for a particular type of treatment over alternative therapies. Though it may be unavoidable, providers' personal prejudices, lifestyle choices, and pressures from the organization they work with may introduce bias in the type of information and advice patients receive about choosing among different treatment options.

The tug of war over who should have access to information is not only being fought between patients and providers, but also between providers and insurers. Recently, some health maintenance organizations have removed "gag clauses" from their contracts with physicians that, in effect, restricted physicians from mentioning medical procedures or expensive treatments that were not reimbursed by the patient's health plan. "Gag clauses" and other restrictions, such as insurers' denial of coverage for costly experimental therapies, on interpersonal relationships between patients and providers pose threats to the quality of health care.

STRENGTHS AND LIMITATIONS OF THE RESEARCH

The 1993 National Patient Survey was designed to gather information on various aspects of patient-centered care. It collected detailed information about hospital patients' reports of problems with the quality of interpersonal communication with their providers. The survey, however, did not provide information on the specific causes of communication problems between patients and providers. Nonetheless, the National Patient Survey provides an important opportunity to examine patients' perceptions of the quality of their care.

There are disadvantages of using secondary data to analyze the extent and nature of communication problems between patients and providers. As with other studies that rely on cross-sectional data, causal links between the explanatory variables and dependent variables cannot necessarily be made. While the present study focused on patients' reports of the quality of interpersonal aspects of care as measures of quality, there are inherent limitations in such data.

The ten items of the Uncertainty Scale, indicating patient-provider communication problems, were measured using nominal response scales. These responses may incorporate measurement error because patients' reports of suboptimal communication may not be truly discrete phenomenon which they can classify by either "yes" or "no." Questions with only "yes" or "no" response options do not allow respondents the opportunity to report variations along a continuum of possible responses. Rather than measuring patients' experiences with communication problems with dichotomous data, an alternative and more revealing way might have been to use a wider range of response options.

The National Patient Survey did not include important variables relevant to a comprehensive investigation of interpersonal communication between patients and providers. While the survey provided limited data on important patient characteristics, there were no data on providers' gender or other sociodemographic characteristics. Moreover, the survey lacked data on important patient characteristics such as culture, social values, expectations of care, knowledge of their medical condition, prior experience or association with their illness, perceptions of illness, personal needs, desires and interests, communication skills and style, physical health, clinical data on severity of illness, emotional well-being, sensory and cognitive ability, and differences in patients' desire for information. Additionally, the survey did not provide data on situational factors such as the setting in which patient-provider communication took place (e.g., whether there were physical distractions in the environment that may have inhibited patients' comprehension of information). Thus, an important shortcoming of the present research is that it did not contain comprehensive data on additional factors that may have influenced patients' perceptions of the quality of interpersonal communication.

This research defined the older-age category to include persons 65 years of age and older. However, it should be emphasized that the aged population is not a homogeneous group. Researchers have distinguished between the "young old," including those persons 65-74 years of age, and the "old-old" including those persons 85 years of age and older (Haug and Ory 1987). Thus, an important limitation of the study is that differences between these age cohorts were not examined. The study focused solely on three major age categories to distinguish among younger and older patients. The age groups were defined as: younger-age (18-40 years), middle-age (41-64 years), and older-age (65 years and older).

An assumption that underlies much of the literature is that communication is a one-way interaction, in which information flows *from* health care providers *to* patients. This view fails to acknowledge that patients play an important role in the exchange of information with providers. Many studies fail to focus on the effect of two-way interaction between patients and providers on the quality of communication. In fact, this dissertation is limited by the fact that the National Patient Survey relied solely on patients' reports of interpersonal aspects of care and did not include additional information on the nature of communication with providers. Moreover, this study is further limited by not having data on the content of information communicated between patients and providers. However, one of the most significant shortcoming of the present study is the relatively small sample size, among certain subgroups of the patient population, who reported communication problems.

Lastly, there exists another important limitation inherent in studies that rely exclusively on telephone-based surveys: data may possibly be biased by sampling only households with telephones and those individuals who are willing to participate in a telephone-based survey.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future studies should link aspects of patient-centered care to outcomes of care. Examining the relationship between patient-provider communication and health outcome measures (e.g., health status, medical complications after hospital discharge, hospital readmissions) may provide valuable information on the overall quality of care. Such research would complement the work of other researchers who have found significant relationships between patient-provider interactions and patient outcomes (Kaplan et al. 1996, 1993, 1989).

Future research should explore the use of longitudinal data to examine changes in the nature and dynamic of patient-provider relationships over time. Because patient surveys, by their retrospective nature, provide information on patients' experiences with care *after the fact*, future research should focus on whether health systems are acting *proactively* to improve the quality of their care.

As economic, political, and social pressures influence changes in the structure of the health care system, little is known about the impact of these changes on the quality of patient-provider relationships. For instance, researchers should investigate the effect of cost-containment policies and its effect on the patient-provider relationship. As hospitals discharge patients just a few short hours after outpatient surgical procedures or send them home after a brief hospital stay, more patients are increasingly responsible for their own care. Yet, many patients may be ill prepared to leave the hospital and deal with their illness or recovery if they did not receive adequate information from their physician or nurse about instructions after hospital discharge. Thus, patients become vulnerable to poor quality of care due to ineffective communication with their providers.

Future research should focus on new efforts and technologies to help consumers acquire and use information to improve their health status and quality of medical care. While computer technology has potential as an important avenue of information dissemination, it may inadvertently leave out certain groups who are vulnerable to be underserved by the health care system, such as those with low literacy or those with no insurance coverage.

Providers' communicative styles plays an important role in patients' access to information and understanding of their diagnosis, prognosis, and treatment options. One way to address the information needs of patients is to teach good communication and interpersonal skills to medical students. Medical residents should be able to demonstrate a minimum level of "competence" in communication and interpersonal skills as a condition of board certification (Davies and Ware 1988).

In summary, this dissertation recommends that policymakers and clinicians involved in reforms of the American health care system investigate strategies to enhance the quality of interpersonal aspects of care, especially given cost-containment strategies that may undermine the quality of care and result in poor patient outcomes. There is a distinct need to evaluate how recent and rapid changes in health care system impact the quality of patient care services. One way to do this is to understand better how patients evaluate the quality of their care and seek ways to address patients' information needs and expectations of care.

CONCLUSION

This dissertation underscores the importance of patients' perceptions of the quality of interpersonal communication with their providers. This study found that the extent of communication problems reported by hospital patients was widespread. Nearly one in two (50 percent) hospital patients reported at least one or more communication problems with their providers. One of the major findings suggests that patients may not have been properly prepared to leave the hospital because they reported many problems with communication issues related to discharge planning.

One of the most common communication problems concerned information on the side effects of medications. Providers have an ethical, moral, and legal obligation to "do no harm," which means that physicians should give information to patients on potential side effects of medications and the dangers of drug interactions, as well as any and all information that patients need to recover from illness. Accordingly, insurers should reimburse providers (physicians and nurses, alike) for time spent communicating and educating patients about their medical condition and treatment issues, such as medications use.

As emphasized previously, effective patient-provider communication is a critical component of good medical care. There are serious concerns that recent trends in the health care system are contributing to an erosion of interpersonal relationships between patients and providers. For instance, such changes include health plan policies that limit providers' time with patients, restrict providers' ability to inform patients about different treatment options, and curtail providers' time to comprehensively educate patients about their medical condition and treatment. Such policies have had a profound influence on patients' perceptions about

their access to care and the quality of the services they receive. This dissertation demonstrates that patients are clearly concerned about the quality of their interpersonal communication with providers and that many recently-discharged hospital patients experienced problems with not receiving enough information related to their hospital discharge. As emphasized above, there are clear indications that further action in monitoring the quality of interpersonal aspects of care is needed. By recognizing the scope of communication problems between patients and providers, we have taken a first step in resolving this important problem, which underlies the quality of health care services.

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APPENDIX 1

FACTOR ANALYSIS

As discussed in Chapter 3, uncertainty has been examined primarily from the medical standpoint, related to physicians' encounters with limitations in medical knowledge about illness (Fox 1957). The present research explored patients' encounters with uncertainty based on inadequate or suboptimal information communicated by their health care providers. Lack of information is one possible source of patients' uncertainty about their medical condition and treatment. The conceptual model of uncertainty was analyzed in context of patients' reports of problems related to the communication of information.

The factor analysis conducted for the present study produced two distinct factors or dimensions associated with the nature of communication problems reported by patients. These factors were interpreted as problems associated with the *clarity* of information, illustrated in Table 1. These factors were used to test hypotheses about the relationship between patients' characteristics and patients' reports of *types* of communication problems.

Table 1.1
Factors Associated With Patients' Reports of Communication Problems

FACTOR 1	FACTOR 2
Patient did not get understandable answers to questions from doctor (UNC_1) Patient did not get understandable answers to questions from nurse (UNC_2) Patient believed that doctors or nurses withheld information (UNC_3) Patient believed that doctors or nurses gave conflicting information (UNC_4) Patient received no understandable explanations of medical tests (UNC_9) Patient received no understandable explanations of the results of tests (UNC_10)	Patient not given information on the important side effects of medications (UNC_5) Patient not given all the information needed to help recover after hospital discharge (UNC_6) Patient not given information on danger signs after hospital discharge (UNC_7) Patient not given information on resuming usual activities after hospital discharge (UNC_8)

One method used to examine the Uncertainty Scale's internal consistency was by using the Cronbach's Alpha. The alpha of the Uncertainty Scale was 0.79, which is considered high, indicating that the scale was reliable. As displayed in Table 2, the corrected item-total coefficient revealed moderate relationships between each item and the remaining items of the scale. To assess "the degree of equivalence between answers to sets of questions constructed [in a scale]," the Cronbach's Alpha was calculated when each item was deleted from the sub-scales (Aday 1989, p.46). Removing any item of the scales of the two factors does not increase the Cronbach's Alpha of the scale, as illustrated in Table 2. The multi-item scale was tested for internal consistency reliability using the Cronbach's alpha; the alphas for FACTOR 1 and FACTOR 2 were satisfactory (alpha $\geq$ .65) for group comparisons.

Table 1.2
Reliability Analysis of Two Factors of the Uncertainty Scale

Variable	Type of Communication Problem	Item-Total Correlation	Alpha if item deleted
	FACTOR 1		
UNC_1	Patient did not get understandable answers to questions from doctor	.57	.72
UNC_2	Patient did not get understandable answers to questions from nurse	.45	.74
UNC_3	Patient believed that doctors or nurses withheld information	.50	.73
UNC_4	Patient believed that doctors or nurses gave conflicting information	.46	.75
UNC_9	Patient received no understandable explanations of the purpose of tests	.51	.73
UNC_10	Patient received no understandable explanations of the results of tests	.58	.71
		Alpha: 0.76	
	FACTOR 2		
UNC_5	Patient not given information on the important side effects of medications	.45	.56
UNC_6	Patient not given all the information needed to help recover after discharge	.45	.58
UNC_7	Patient not given information on danger signs after discharge	.52	.51
UNC_8	Patient not given information on resuming usual activities after discharge (e.g., work)	.34	.64
		Alpha: 0.65	

APPENDIX 2

THE PICKER INSTITUTE'S

1993 NATIONAL PATIENT SURVEY

a. Medical Patient Survey Instrument

b. Surgical Patient Survey Instrument

FIRST.DIAL

A. (INTERVIEWER: MAKE SURE YOU ARE TALKING TO SOMEONE 18 OR OLDER)

Have I reached (###) ### - #### ?

Hello, my name is _____, and I am calling to interview a member of your household about their recent hospitalization.

(I wonder if I could speak to that person now?)

(IF MORE THAN ONE PERSON HOSPITALIZED, CLARIFY: "I am calling to speak with the person who was *most recently discharged*.")

1. CONTINUE
2. REFUSAL
3. APPOINTMENT
4. NEW NUMBER, RING NO ANSWER, ANS MACH, OTHER
5. NO SUCH RESPONDENT
6. SPANISH HOUSEHOLD/LANGUAGE PROBLEM

1. (Hello, my name is _____.)

(I'm calling you to ask you questions about your recent hospitalization.)

(Do I have the right person?)

(IF R SAYS MORE THAN ONE PERSON HOSPITALIZED, PROBE: "Were you discharged the most recently?")

1. YES
2. NO, R IS SOMEONE ELSE IN THE HOUSEHOLD
3. NO ONE IN HOUSEHOLD HOSPITALIZED --------> TERMINATE

2. I'm calling for the Picker/Commonwealth Program for Patient-Centered Care, a national, non-profit organization that collects patient reports about their experiences in the hospital to help hospitals better meet the needs of patients. The Program is interviewing patients about their care in cooperation with your hospital. The purpose of this survey is to improve hospital care and the way hospitals treat patients and their families. All your answers will be strictly confidential.

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5. How many times have you been hospitalized overnight in the past 6 months -- just once or more than once?

1. ONCE ----------> Q5A.1
2. MORE THAN ONCE/R GIVES NUMBER LARGER THAN 1
3. NEVER ----------> TERMINATE
9. REFUSAL
DK

IF Q5 = DK OR REF, TERMINATE

5.1 Please tell me ONLY about the MOST RECENT time you were in the hospital overnight as we go through this questionnaire.

5a.3 Were you in the hospital for medical or surgical treatment, OR did you have a baby, OR were you in the hospital for some other reason?

(IWER: IF R MENTIONS C-SECTION, ENTER OPTION 2)

(IWER: IF YOU HEAR A MALE SAYING "Childbirth", CLARIFY: "I beg your pardon, this is just a generic question we ask all respondents. Please tell me why you YOURSELF were admitted to the hospital.")

1. MEDICAL/SURGICAL
2. CHILDBIRTH/HAD BABY
3. MENTAL HEALTH/OTHER
DK

IF Q5A.3 = MEDICAL/SURGICAL THEN GO TO Q6
IF Q5A.3 = CHILDBIRTH/HAD BABY THEN SWITCH TO OB INSTRUMENT
IF Q5A.3 = MENTAL HEALTH/OTHER OR DK THEN TERMINATE

6. The next questions are about your experience during your MOST RECENT HOSPITALIZATION. Please think only about that period of time and NOT about any other hospitalizations. Was this hospitalization scheduled in advance or was it an emergency?

1. SCHEDULED ----------> Q10
2. EMERGENCY
3. ALL ADMISSIONS BLUR-CAN'T REMEMBER (DO NOT READ) ---> TERMINATE
DK ----------> Q10

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7. Were you admitted through the emergency room?

   1. YES
   2. NO ---> Q10
   DK -------> Q10

8. How well-organized was the care you received in the emergency room? Would you say very well-organized, somewhat, not very, or not at all organized?

   1. VERY
   2. SOMEWHAT
   3. NOT VERY
   4. NOT AT ALL
   5. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ) --> Q10
   DK

9. While you were in the emergency room, did you get as much information about your medical condition and treatment as you wanted to get?

   1. YES
   2. NO
   3. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ)
   DK

10. Did you have any choice in going to this hospital, or was it the only one you could have gone to?

    (IWER: IF R SAYS, "The ambulance crew chose the hospital", enter "2")

    1. HAD CHOICE
    2. ONLY ONE/NO CHOICE/CLOSEST HOSPITAL
    DK

11. Did you have a regular doctor at the time this hospitalization began?

    1. YES
    2. NO ---> CK.Q14
    DK -------> CK.Q14

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12. Did that doctor take care of you in the hospital?

1. YES
2. NO
3. YES, BUT I HAD OTHER DOCTORS AS WELL (DO NOT READ)
DK

13. Did you expect him or her to take care of you in the hospital?

1. YES
2. NO
DK

14. How many NIGHTS did you stay in the hospital during this admission?

(IF R INDICATES THEY DID NOT STAY OVERNIGHT,
ENTER 000 - IW WILL TERMINATE.)

_____ # OF NIGHTS
DK

CASES WITHOUT OVERNIGHT STAYS IN Q14 TERMINATED AFTER OCT 12, 1993.

15. Were you in the intensive care unit or coronary care unit during this hospitalization?

(IF NECESSARY, CLARIFY: "A coronary care unit is an intensive care unit for heart patients")

1. YES, IN INTENSIVE CARE UNIT OR CORONARY CARE UNIT.
2. NO
DK

16. Was there one particular doctor who was in charge of your care in the hospital?

1. YES
2. NO
DK

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17. When you had important questions to ask a doctor, did you ALWAYS get answers you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. NO IMPORTANT QUESTIONS (DO NOT READ)
DK

18. When you had important questions to ask a NURSE, did you ALWAYS get answers you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. NO IMPORTANT QUESTIONS (DO NOT READ)
DK

19. If you had any anxieties or fears about your condition or treatment, did a doctor or nurse discuss them with you?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. HAD NO ANXIETIES OR FEARS (DO NOT READ)
DK

20. Did you ever think that the doctors or nurses were withholding information from you?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

21. Sometimes, in the hospital, one doctor or nurse will say one thing and another will say something quite different. Did this ever happen to you during your hospital stay?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

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22. Did you have enough SAY about your treatment in the hospital?

(IF R SAYS THEY JUST DID WHAT THE DOCTOR SAID, REPEAT QUESTION)

1. YES
2. NO
3. HAD TOO MUCH SAY (DO NOT READ)
4. R DIDN'T WANT ANY SAY (DO NOT READ)

DK

23. Did the doctors or nurses EVER talk in front of you as if you weren't there?

1. YES
2. NO ----------> Q25
3. SOMETIMES/USUALLY (DO NOT READ)

DK ----------> Q25

24. About how many times did that happen (that doctors or nurses talked in front of you as if you weren't there)?

(READ LIST IF NECESSARY)

1. ONE OR TWO TIMES
2. THREE TO FIVE TIMES
3. SIX TO TEN TIMES
4. MORE THAN TEN TIMES

DK

25. Did anyone in the hospital ever examine you or treat you without explaining first what they were going to do?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)

DK

26. Did you have confidence and trust in the doctors treating you at the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)

DK

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27. In general, was the doctors' manner in the hospital very reassuring somewhat reassuring, somewhat upsetting, or very upsetting?

1. VERY REASSURING
2. SOMEWHAT REASSURING
3. NEITHER REASSURING NOR UPSETTING (DO NOT READ)
4. SOMEWHAT UPSETTING
5. VERY UPSETTING

DK

28. Did you have confidence and trust in the NURSES treating you at the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)

DK

29. In general, was the NURSES' manner in the hospital very reassuring somewhat reassuring, somewhat upsetting, or very upsetting?

1. VERY REASSURING
2. SOMEWHAT REASSURING
3. NEITHER REASSURING NOR UPSETTING (DO NOT READ)
4. SOMEWHAT UPSETTING
5. VERY UPSETTING

DK

30. While you were in the hospital, how much information about your condition or treatment was given to your family or someone close to you; TOO MUCH information, JUST THE RIGHT AMOUNT of information, or NOT ENOUGH information?

1. TOO MUCH
2. RIGHT AMOUNT
3. NOT ENOUGH
4. NO FAMILY/FRIENDS (DO NOT READ) ----------> Q32
5. NO VISITS/FAMILY DIDN'T WANT OR NEED INFORMATION (DO NOT READ)

DK

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31. While you were in the hospital, did your family or someone close to you have enough opportunity to talk to your doctor?

(IF R DID NOT WANT SOMEONE TO TALK TO THE DOCTOR, ENTER "4")

1. YES
2. NO
3. NO FAMILY/FRIENDS (DO NOT READ)
4. NO VISITS/NEVER WANTED OR NEEDED TO TALK (DO NOT READ)

DK

32. And how easy was it for YOU to find someone on the hospital staff to talk to about your personal concerns -- very easy, somewhat, not very, or not at all easy?

1. VERY
2. SOMEWHAT
3. NOT VERY
4. NOT AT ALL
5. R HAD NO PERSONAL CONCERNS/NEVER WANTED TO TALK (DO NOT READ)

DK

33. When you needed help with things like eating, bathing, or getting to the bathroom, did you usually get it in time?

1. YES
2. NO
3. R NEVER NEEDED HELP (DO NOT READ)

DK

34. How many minutes after you used the call button did it usually take, on average, before you got the help you needed?

(IF R DOSEN'T KNOW WHAT A CALL BUTTON IS, CLARIFY: "This is a button you push when you want a nurse to come and help you.")

____ # OF MINUTES IF "IT VARIED", PROBE: How long on average?

ANY TIME LESS THAN 1 MINUTE = "0000 MI"
"IMMEDIATELY" SHOULD BE CODED "0000 MI"
"NEVER USED CALL BUTTON" SHOULD BE CODED "9996 MI"
"NEVER GOT HELP" SHOULD BE CODED "9997 MI"

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35. Did anyone on the hospital staff go out of their way to help you or to make you feel better?

1. YES
2. NO
DK

36. Did you feel like you were treated with respect and dignity while you were in the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

37. While in the hospital, how much of the time were you in any pain -- all of the time, most of the time, about half the time, less than half the time, or none of the time?

1. ALL
2. MOST
3. ABOUT HALF
4. LESS THAN HALF
5. NONE ----------> Q46
DK

38. When you had pain, was it usually severe, moderate, or mild?

(IF R SAYS "IT VARIED", PROBE: "How was it on average?")

1. SEVERE
2. MODERATE
3. MILD
DK

39. Did your doctors or nurses tell you to expect pain?

1. YES
2. NO ----------> Q41
DK ----------> Q41

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40. Was the pain you experienced about THE SAME as you were told to expect, WORSE than you were told, or NOT AS BAD as you were told?

1. THE SAME
2. WORSE
3. NOT AS BAD
4. NOT TOLD HOW MUCH TO EXPECT (DO NOT READ)
DK

41. Did you have a machine that you could use to give yourself pain medicine?

1. YES --> Q45
2. NO
DK

42. Did you ever request pain medicine?

1. YES
2. NO ---> Q46
DK -------> Q46

43. How many minutes after you requested pain medicine did it usually take, on average, before you got it?

____ # OF MINUTES IF "IT VARIED", PROBE: How long on average?

ANY TIME LESS THAN 1 MINUTE = "0000 MI"
"IMMEDIATELY" SHOULD BE CODED "0000 MI"
"NEVER GOT HELP" SHOULD BE CODED "9997 MI"

IF Q43 = 000 THEN GO TO Q45

44. Do you think that much of your pain could have been eliminated if the hospital staff had acted more promptly?

1. YES
2. NO
DK

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45. Overall, do you think you got NOT ENOUGH pain medicine in the hospital, JUST THE RIGHT AMOUNT, or TOO MUCH pain medicine?

1. NOT ENOUGH
2. RIGHT AMOUNT
3. TOO MUCH
DK

46. Did someone on the hospital staff always explain why MAJOR tests were being done in a way that you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. NO MAJOR TESTS (DO NOT READ) -----> Q48
DK

47. After the MAJOR tests were done, did a doctor or nurse ALWAYS explain the results in a way you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. EXPLAINED TO SPOUSE OR OTHER CAREGIVER (DO NOT READ)
5. R DID NOT WANT TO KNOW (DO NOT READ)
DK/TEST DONE TOO RECENTLY TO GET RESULTS/EXPLANATION (DO NOT READ)

48. Were your SCHEDULED tests and procedures ALWAYS performed on time or were they EVER delayed?

1. ALWAYS ON TIME/AHEAD OF SCHEDULE ----> CK.Q95
2. EVER DELAYED
3. NO TESTS/PROCEDURES (DO NOT READ) --> CK.Q95
DK ----------> CK.Q95

49. How often were they delayed -- always, usually, sometimes, or only rarely?

1. ALWAYS
2. USUALLY
3. SOMETIMES
4. RARELY
DK

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58. While you were in the hospital, did you have any serious worries about problems you might have or extra help you might need after leaving the hospital?

1. YES
2. NO ---> CK.Q99
DK -------> CK.Q99

59. Did someone on the hospital staff help you with those worries?

1. YES
2. NO
DK

60. Did you know what medicines you were to take when you went home?

1. YES
2. NO ----------> Q62
3. NO MEDICINES (DO NOT READ) --> Q63
DK ----------> Q62

61. Did someone on the hospital staff explain the purpose of these medicines in a way you could understand?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

62. Did someone on the hospital staff tell you about important side effects from the medicine to watch out for when you went home?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
4. NO MEDICINES AT HOME (DO NOT READ)
5. NO IMPORTANT SIDE EFFECTS (DO NOT READ)
DK

63. Did they tell you what danger signals about your illness to watch for after you went home?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

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64. Did they tell you when you could resume your usual activities, such as when to go back to work?

(INTERVIEWER: IF R SAYS "I don't work, I'm retired", CLARIFY: "Did they tell you when you could resume your usual activities, SUCH AS when to go back to work or drive a car?")

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

65. Did they tell you when to see a doctor for a follow-up visit?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

66.(1-2). While you were in the hospital, about how many minutes, if any, did

1. "a doctor "
2. "a nurse "

spend telling you how to take care of yourself (after you left the hospital)?

(IF DK, PROBE: What's your best estimate?)

(IF R ASKS IF THIS INCLUDES ANY TIME DURING THE HOSPITAL STAY, CLARIFY: "This includes any time during your hospital stay.")

(IF R SAYS "NO TIME" - ENTER "0000 MI")
(IF R SAYS "MORE THAN ONE" ASK R FOR A COMBINED TOTAL)

____ # OF MINUTES
DK

67. Did the doctors and nurses give you all the information you needed to help yourself recover?

1. YES
2. NO
DK

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IF Q30=4 OR Q31=3 THEN GO TO Q69

68. Did the doctors and nurses give your family or someone close to you all the information they needed to help you recover?

(IF R DID NOT WANT ANYONE ELSE TO BE GIVEN INFORMATION, ENTER "4")

1. YES
2. NO
3. NO FAMILY/NO ADULT FAMILY (DO NOT READ)
4. NO VISITS/NEVER WANTED OR NEEDED INFORMATION (DO NOT READ)
DK

69. While you were in the hospital, how worried were you about how you would pay your hospital bill -- very worried, somewhat, not very, or not at all worried?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. VERY
2. SOMEWHAT
3. NOT VERY
4. NOT AT ALL --> Q71
DK

70. Did you get as much help as you wanted from someone on the hospital staff in figuring out how to pay your hospital bill?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. YES
2. NO
3. NO ONE HELPED (DO NOT READ)
4. R DIDN'T WANT/NEED ANY HELP (DO NOT READ)
DK

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71. Did anyone tell you (either BEFORE you went into the hospital or) DURING your hospitalization how much of your hospital bill you would have to pay on your own?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. YES
2. NO
DK

72. Did you have any questions about your bill, either while you were in the hospital or after you were discharged?

1. YES
2. NO ----------> INTRO.Q74
3. R DID NOT GET BILL YET (DO NOT READ) --> INTRO.Q74
DK ----------> INTRO.Q74

73. Did you get as much help as you wanted (from someone on the hospital staff with these questions)?

1. YES
2. NO
3. DIDN'T GET/WANT HELP (DO NOT READ)
DK

INTRO.Q74

INTRO.Q74. Please rate the following aspects of your care as either excellent, very good, good, fair, or poor. First...

(PRESS ANY KEY TO CONTINUE)

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ROTATE Q74.1,Q74.3,Q74.4,Q74.5

(ROTATE Q74.1 AND Q74.2 TOGETHER)

74.(1-5) (How would you rate/How about)

1. "the courtesy and helpfulness of your doctors?"
2. "the courtesy and helpfulness of your nurses?"
3. "the availability of nurses?"
4. "the availability of doctors?"
5. "how well the doctors and nurses worked together?"

(READ LIST IF NEEDED)

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR

DK

75. OVERALL, how would you RATE the care you received at the hospital -- was it excellent, very good, good, fair, or poor?

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR

DK

76. Would you recommend this hospital to your friends and family if they needed to be hospitalized?

1. YES ----------> Q78
2. NO
3. IT DEPENDS (DO NOT READ)
9. REFUSED ----------> Q78

DK

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77. [If you were to recommend AGAINST going to this hospital, what would be your MOST important reason for doing so?/What is the MOST important reason you would not recommend the hospital?]

(DO NOT READ LIST) (ACCEPT MULTIPLE MENTIONS)

(DO *NOT* PROBE)

01. THEIR DOCTOR DOES NOT PRACTICE THERE
02. LOCATION
03. QUALITY OF MEDICAL CARE/POOR OUTCOME
04. UNFRIENDLY STAFF/INCONSIDERATE/UNPLEASANT/MEAN
05. BAD NURSES
06. BAD REPUTATION
07. CLEANLINESS OF FACILITY
08. COST/TOO EXPENSIVE
09. DON'T KNOW STAFF
10. OTHER (SPECIFY): _____
DK

78. At this stage in your recovery, would you say your health is excellent, very good, good, fair, or poor?

(IF R SAYS, "IT VARIES", REPEAT QUESTION)

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR
6. TERMINAL (DO NOT READ) --> Q81
DK

79. And IN GENERAL, would you say your health is excellent, very good, good, fair, or poor?

(IF R SAYS, "IT VARIES," PROBE: "Well, IN GENERAL, would you say your health is excellent, very good, good, fair, or poor?")

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR
DK

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80. Overall, is your health now BETTER than you expected, WORSE than you expected, or ABOUT WHAT you expected?

1. BETTER THAN EXPECTED
2. WORSE THAN EXPECTED
3. ABOUT WHAT EXPECTED
DK

81. During the past TWO weeks, how many days did illness or injury keep you in bed all or most of the day?

_____ DAYS
DK

INTRO.Q82

INTRO.Q82. For each of the following statements please tell me whether you agree or disagree. Here's the first statement.

(PRESS ANY KEY TO CONTINUE)

ROTATE Q82.1,Q82.2,Q82.3

82.(1-3) (How about)

1. "A person should go along with their doctor's advice even if they think it's wrong."

2. "A hospitalized patient should not make decisions about his or her own medical care."

3. "Even if medical news is bad, a patient should be told about it."

(Do you agree or disagree?)
(PROBE: Would that be STRONGLY or SOMEWHAT?)

1. STRONGLY AGREE
2. SOMEWHAT AGREE
3. SOMEWHAT DISAGREE
4. STRONGLY DISAGREE
DK

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83. Lastly, we need to ask a few questions to classify your answers. What year were you born?

____ YEAR
9996 = R WAS BORN AFTER 1975
9999. REFUSED
DK

84. What was the last year of school you completed?

(READ LIST ONLY IF NECESSARY)

1. LESS THAN HIGH SCHOOL (0-11 YEARS)
2. HIGH SCHOOL GRADUATE OR GED (12 YEARS)
3. SOME COLLEGE/TRADE OR TECHNICAL SCHOOL (13-15 YEARS)
4. COLLEGE GRADUATE (16 YEARS)
5. POST GRADUATE (17 OR MORE YEARS)
9. REFUSED
DK

85. Are you married, separated, divorced, widowed, or never married?

1. MARRIED ----------> CK.Q87
2. LIVING AS IF MARRIED (DO NOT READ) --> CK.Q87
3. SEPARATED
4. DIVORCED
5. WIDOWED
6. NEVER MARRIED
9. REFUSED
DK

Q86 DROPPED STARTING IN 1993

CK.Q87

87. Is your MAIN health insurance Medicare, [Medicaid/MediCAL/Access] , something else, or do you have no insurance?

1. MEDICARE
2. [Medicaid/MediCAL/Access]
3. SOMETHING ELSE
4. NO INSURANCE ----------> Q89
5. MEDICARE / [Medicaid/MediCAL/Access] (NOT SURE WHICH) (DO NOT READ)
9. REFUSED ----------> Q89
DK ----------> Q89

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88. Are you in an HMO (Health Maintenance Organization)?

1. YES
2. NO
DK

89. Are you of Hispanic origin or descent?

(IF R DOESN'T UNDERSTAND, CLARIFY: "By Hispanic I mean of Mexican, Cuban, Puerto Rican, or some other Spanish background.")

1. YES ------> Q91
2. NO
9. REFUSED
DK

90. And are you white, black, Asian, or something else?

1. WHITE
2. BLACK
3. ASIAN
4. SOMETHING ELSE (DO NOT SPECIFY)
9. REFUSED
DK

91. And last, was your total 1992 household income before taxes MORE or LESS than $25,000?

(IF DK, PROBE "WHAT WOULD BE YOUR BEST ESTIMATE?")

1. MORE
2. LESS ----------> Q93
3. EXACTLY $25,000 (DO NOT READ) --> CK.Q94
9. REFUSED ----------> CK.Q94
DK ----------> CK.Q94

92. Was that between 25 and 35, between 35 and 50, or more than $50,000?

1. 25,001 TO $35,000 --> CK.Q94
2. 35,001 TO $50,000 --> CK.Q94
3. MORE THAN $50,000 --> CK.Q94
9. REFUSED ----------> CK.Q94
DK ----------> CK.Q94

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93. Was that less than 7500 ("75-hundred"), between 7500 and 15,000, or more than $15,000?

1. LESS THAN $7500
2. 7500 TO $15,000
3. MORE THAN $15,000
9. REFUSED
DK

94. INTERVIEWER: PLEASE ENTER GENDER OF RESPONDENT

1. MALE
2. FEMALE

THANKS

That's our last question. The Picker/Commonwealth Program for Patient Centered Care appreciates your help in this important effort. Have a good (day/afternoon/evening).

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THE PICKER INSTITUTE'S

1993 NATIONAL PATIENT SURVEY

Surgical Patient Survey Instrument

FIRST.DIAL

A. (INTERVIEWER: MAKE SURE YOU ARE TALKING TO SOMEONE 18 OR OLDER)

Have I reached (###) ### - #### ?

Hello, my name is _____, and I am calling to interview a member of your household about their recent hospitalization.

(I wonder if I could speak to that person now?)

(IF MORE THAN ONE PERSON HOSPITALIZED, CLARIFY: "I am calling to speak with the person who was *most recently discharged*.")

1. CONTINUE
2. REFUSAL
3. APPOINTMENT
4. NEW NUMBER, RING NO ANSWER, ANS MACH, OTHER
5. NO SUCH RESPONDENT
6. SPANISH HOUSEHOLD/LANGUAGE PROBLEM

1. (Hello, my name is _____.)

(I'm calling you to ask you questions about your recent hospitalization.)

(Do I have the right person?)

(IF R SAYS MORE THAN ONE PERSON HOSPITALIZED, PROBE: "Were you discharged the most recently?")

1. YES
2. NO, R IS SOMEONE ELSE IN THE HOUSEHOLD
3. NO ONE IN HOUSEHOLD HOSPITALIZED --------> TERMINATE

2. I'm calling for the Picker/Commonwealth Program for Patient-Centered Care, a national, non-profit organization that collects patient reports about their experiences in the hospital to help hospitals better meet the needs of patients. The Program is interviewing patients about their care in cooperation with your hospital. The purpose of this survey is to improve hospital care and the way hospitals treat patients and their families. All your answers will be strictly confidential.

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5. How many times have you been hospitalized overnight in the past 6 months -- just once or more than once?

1. ONCE ----------> Q5A.1
2. MORE THAN ONCE/R GIVES NUMBER LARGER THAN 1
3. NEVER ----------> TERMINATE
9. REFUSAL
DK

IF Q5 = DK OR REF, TERMINATE

5.1 Please tell me ONLY about the MOST RECENT time you were in the hospital overnight as we go through this questionnaire.

5a.3 Were you in the hospital for medical or surgical treatment, OR did you have a baby, OR were you in the hospital for some other reason?

(IWER: IF R MENTIONS C-SECTION, ENTER OPTION 2)

(IWER: IF YOU HEAR A MALE SAYING "Childbirth", CLARIFY: "I beg your pardon, this is just a generic question we ask all respondents. Please tell me why you YOURSELF were admitted to the hospital.")

1. MEDICAL/SURGICAL
2. CHILDBIRTH/HAD BABY
3. MENTAL HEALTH/OTHER
DK

IF Q5A.3 = MEDICAL/SURGICAL THEN GO TO Q6
IF Q5A.3 = CHILDBIRTH/HAD BABY THEN SWITCH TO OB INSTRUMENT
IF Q5A.3 = MENTAL HEALTH/OTHER OR DK THEN TERMINATE

6. The next questions are about your experience during your MOST RECENT HOSPITALIZATION. Please think only about that period of time and NOT about any other hospitalizations. Was this hospitalization scheduled in advance or was it an emergency?

1. SCHEDULED ----------> Q10
2. EMERGENCY
3. ALL ADMISSIONS BLUR-CAN'T REMEMBER (DO NOT READ) ---> TERMINATE
DK ----------> Q10

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7. Were you admitted through the emergency room?

   1. YES
   2. NO ---> Q10
   DK -------> Q10

8. How well-organized was the care you received in the emergency room? Would you say very well-organized, somewhat, not very, or not at all organized?

   1. VERY
   2. SOMEWHAT
   3. NOT VERY
   4. NOT AT ALL
   5. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ) --> Q10
   DK

9. While you were in the emergency room, did you get as much information about your medical condition and treatment as you wanted to get?

   1. YES
   2. NO
   3. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ)
   DK

10. Did you have any choice in going to this hospital, or was it the only one you could have gone to?

    (IWER: IF R SAYS, "The ambulance crew chose the hospital", enter "2")

    1. HAD CHOICE
    2. ONLY ONE/NO CHOICE/CLOSEST HOSPITAL
    DK

11. Did you have a regular doctor at the time this hospitalization began?

    1. YES
    2. NO
    DK

IF Q11=NO OR DK, GO TO CK.Q14
IF Q11=YES, GO TO Q12

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12. Did (that doctor/that midwife) take care of you in the hospital?

1. YES
2. NO
3. YES, BUT I HAD OTHER DOCTORS/MIDWIVES AS WELL (DO NOT READ)
DK

IF Q12=1 OR 3, GO TO CK.Q13.OB

13. Did you expect him or her to (take care of you in the hospital)?

1. YES
2. NO
DK

14. How many NIGHTS did you stay in the hospital during this admission?

(IF R INDICATES THEY DID NOT STAY OVERNIGHT,
ENTER 000 - IW WILL TERMINATE.)

_____ # OF NIGHTS
DK

CASES WITHOUT OVERNIGHT STAYS IN Q14 TERMINATED AFTER OCT 12, 1993.

15. Were you in the intensive care unit or coronary care unit during this hospitalization?

(IF NECESSARY, CLARIFY: "A coronary care unit is an intensive care unit for heart patients")

1. YES, IN INTENSIVE CARE UNIT OR CORONARY CARE UNIT.
2. NO
DK

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16. Was there one particular doctor who was in charge of your care in the hospital?

    1. YES
    2. NO
    DK

17. When you had important questions to ask a doctor, did you ALWAYS get answers you could understand?

    1. YES
    2. NO
    3. SOMETIMES/USUALLY (DO NOT READ)
    4. NO IMPORTANT QUESTIONS (DO NOT READ)
    DK

18. When you had important questions to ask a NURSE, did you ALWAYS get answers you could understand?

    1. YES
    2. NO
    3. SOMETIMES/USUALLY (DO NOT READ)
    4. NO IMPORTANT QUESTIONS (DO NOT READ)
    DK

19. If you had any anxieties or fears about your condition or treatment, did a doctor or nurse discuss them with you?

    1. YES
    2. NO
    3. SOMETIMES/USUALLY (DO NOT READ)
    4. HAD NO ANXIETIES OR FEARS (DO NOT READ)
    DK

20. Did you ever think that the doctors or nurses were withholding information from you?

    1. YES
    2. NO
    3. SOMETIMES/USUALLY (DO NOT READ)
    DK

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21. Sometimes, in the hospital, one doctor or nurse will say one thing and another will say something quite different. Did this ever happen to you during your hospital stay?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

22. Did you have enough SAY about your treatment in the hospital?

(IF R SAYS THEY JUST DID WHAT THE DOCTOR SAID, REPEAT QUESTION)

1. YES
2. NO
3. HAD TOO MUCH SAY (DO NOT READ)
4. R DIDN'T WANT ANY SAY (DO NOT READ)
DK

23. Did the doctors or nurses EVER talk in front of you as if you weren't there?

1. YES
2. NO ----------> Q25
3. SOMETIMES/USUALLY (DO NOT READ)
DK ----------> Q25

24. About how many times did that happen (that doctors or nurses talked in front of you as if you weren't there)?

(READ LIST IF NECESSARY)

1. ONE OR TWO TIMES
2. THREE TO FIVE TIMES
3. SIX TO TEN TIMES
4. MORE THAN TEN TIMES
DK

25. Did anyone in the hospital ever examine you or treat you without explaining first what they were going to do?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

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26. Did you have confidence and trust in the doctors treating you at the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

27. In general, was the doctors' manner in the hospital very reassuring somewhat reassuring, somewhat upsetting, or very upsetting?

1. VERY REASSURING
2. SOMEWHAT REASSURING
3. NEITHER REASSURING NOR UPSETTING (DO NOT READ)
4. SOMEWHAT UPSETTING
5. VERY UPSETTING
DK

28. Did you have confidence and trust in the NURSES treating you at the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

29. In general, was the NURSES' manner in the hospital very reassuring somewhat reassuring, somewhat upsetting, or very upsetting?

1. VERY REASSURING
2. SOMEWHAT REASSURING
3. NEITHER REASSURING NOR UPSETTING (DO NOT READ)
4. SOMEWHAT UPSETTING
5. VERY UPSETTING
DK

30. While you were in the hospital, how much information about your condition or treatment was given to your family or someone close to you: TOO MUCH information, JUST THE RIGHT AMOUNT of information, or NOT ENOUGH information?

1. TOO MUCH
2. RIGHT AMOUNT
3. NOT ENOUGH
4. NO FAMILY/FRIENDS (DO NOT READ) ----------> Q32
5. NO VISITS/FAMILY DIDN'T WANT OR NEED INFORMATION (DO NOT READ)
DK

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31. While you were in the hospital, did your family or someone close to you have enough opportunity to talk to your doctor?

(IF R DID NOT WANT SOMEONE TO TALK TO THE DOCTOR, ENTER "4")

1. YES
2. NO
3. NO FAMILY/FRIENDS (DO NOT READ)
4. NO VISITS/NEVER WANTED OR NEEDED TO TALK (DO NOT READ)

DK

32. And how easy was it for YOU to find someone on the hospital staff to talk to about your personal concerns -- very easy, somewhat, not very, or not at all easy?

1. VERY
2. SOMEWHAT
3. NOT VERY
4. NOT AT ALL
5. R HAD NO PERSONAL CONCERNS/NEVER WANTED TO TALK (DO NOT READ)

DK

33. When you needed help with things like eating, bathing, or getting to the bathroom, did you usually get it in time?

1. YES
2. NO
3. R NEVER NEEDED HELP (DO NOT READ)

DK

34. How many minutes after you used the call button did it usually take, on average, before you got the help you needed?

(IF R DOSEN'T KNOW WHAT A CALL BUTTON IS, CLARIFY: "This is a button you push when you want a nurse to come and help you.")

____ # OF MINUTES IF "IT VARIED", PROBE: How long on average?

ANY TIME LESS THAN 1 MINUTE = "0000 MI"
"IMMEDIATELY" SHOULD BE CODED "0000 MI"
"NEVER USED CALL BUTTON" SHOULD BE CODED "9996 MI"
"NEVER GOT HELP" SHOULD BE CODED "9997 MI"

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35. Did anyone on the hospital staff go out of their way to help you or to make you feel better?

1. YES
2. NO
DK

36. Did you feel like you were treated with respect and dignity while you were in the hospital?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
DK

37. While in the hospital, how much of the time were you in any pain -- all of the time, most of the time, about half the time, less than half the time, or none of the time?

1. ALL
2. MOST
3. ABOUT HALF
4. LESS THAN HALF
5. NONE ----------> Q46
DK

38. When you had pain, was it usually severe, moderate, or mild?

(IF R SAYS "IT VARIED", PROBE: "How was it on average?")

1. SEVERE
2. MODERATE
3. MILD
DK

39. Did your doctors or nurses tell you to expect pain?

1. YES
2. NO ----------> Q41
DK ----------> Q41

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40. Was the pain you experienced about THE SAME as you were told to expect, WORSE than you were told, or NOT AS BAD as you were told?

1. THE SAME
2. WORSE
3. NOT AS BAD
4. NOT TOLD HOW MUCH TO EXPECT (DO NOT READ)
DK

41. Did you have a machine that you could use to give yourself pain medicine?

1. YES --> Q45
2. NO
DK

42. Did you ever request pain medicine?

1. YES
2. NO ---> Q46
DK -------> Q46

43. How many minutes after you requested pain medicine did it usually take, on average, before you got it?

____ # OF MINUTES IF "IT VARIED", PROBE: How long on average?

ANY TIME LESS THAN 1 MINUTE = "0000 MI"
"IMMEDIATELY" SHOULD BE CODED "0000 MI"
"NEVER GOT HELP" SHOULD BE CODED "9997 MI"

IF Q43 = 000 THEN GO TO Q45

44. Do you think that much of your pain could have been eliminated if the hospital staff had acted more promptly?

1. YES
2. NO
DK

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45. Overall, do you think you got NOT ENOUGH pain medicine in the hospital, JUST THE RIGHT AMOUNT, or TOO MUCH pain medicine?

1. NOT ENOUGH
2. RIGHT AMOUNT
3. TOO MUCH
DK

46. Did someone on the hospital staff always explain why MAJOR tests were being done in a way that you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. NO MAJOR TESTS (DO NOT READ) -----> Q48
DK

47. After the MAJOR tests were done, did a doctor or nurse ALWAYS explain the results in a way you could understand?

1. YES
2. NO
3. SOMETIMES/USUALLY (DO NOT READ)
4. EXPLAINED TO SPOUSE OR OTHER CAREGIVER (DO NOT READ)
5. R DID NOT WANT TO KNOW (DO NOT READ)
DK/TEST DONE TOO RECENTLY TO GET RESULTS/EXPLANATION (DO NOT READ)

48. Were your SCHEDULED tests and procedures ALWAYS performed on time or were they EVER delayed?

1. ALWAYS ON TIME/AHEAD OF SCHEDULE ----> CK.Q95
2. EVER DELAYED
3. NO TESTS/PROCEDURES (DO NOT READ) --> CK.Q95
DK ----------> CK.Q95

49. How often were they delayed -- always, usually, sometimes, or only rarely?

1. ALWAYS
2. USUALLY
3. SOMETIMES
4. RARELY
DK

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50. Did you have surgery or an operation while you were in the hospital?

1. YES
2. NO ---> Q58
DK ------> Q58

51. Before you had surgery, did the surgeon explain to you what he or she would be doing during surgery?

1. YES
2. NO
3. EXPLAINED TO SPOUSE/CAREGIVER (DO NOT READ)
4. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ) --> Q57
5. R DID NOT WANT TO KNOW (DO NOT READ)
DK

52. Did the surgeon explain the risks and benefits of surgery in a way you could understand?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
4. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ) -----> Q57
5. R DID NOT WANT TO KNOW (DO NOT READ)
DK

53. Did the surgeon or any of your other doctors answer your questions about the surgery in a way you could understand?

1. YES
2. NO
3. DIDN'T HAVE ANY QUESTIONS (DO NOT READ)
DK

54. If you had any anxieties, fears, or concerns about the surgery, did the surgeon discuss them with you?

1. YES
2. NO
3. R HAD NO ANXIETIES/FEARS (DO NOT READ)
DK

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55. Did a doctor or nurse tell you accurately how you would feel AFTER surgery?

1. YES
2. NO
3. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ)
DK

56. Did the anesthesiologist (an-es-thee-see-OL-oh-jist) explain how they would put you to sleep or control your pain during the operation?

(READ IF NEEDED: The anesthesiologist is the doctor in charge of controlling your pain during the operation.)

1. YES
2. NO
3. R WAS UNCONSCIOUS/DISORIENTED (DO NOT READ)
DK/DOES NOT APPLY

57. Once the surgery was over and the doctors knew the results, did anyone on the hospital staff explain the results in a way that you could understand?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR OTHER CAREGIVER (DO NOT READ)
DK

58. While you were in the hospital, did you have any serious worries about problems you might have or extra help you might need after leaving the hospital?

1. YES
2. NO ---> CK.Q99
DK -------> CK.Q99

59. Did someone on the hospital staff help you with those worries?

1. YES
2. NO
DK

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60. Did you know what medicines you were to take when you went home?

1. YES
2. NO ----------> Q62
3. NO MEDICINES (DO NOT READ) --> Q63
DK ----------> Q62

61. Did someone on the hospital staff explain the purpose of these medicines in a way you could understand?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

62. Did someone on the hospital staff tell you about important side effects from the medicine to watch out for when you went home?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
4. NO MEDICINES AT HOME (DO NOT READ)
5. NO IMPORTANT SIDE EFFECTS (DO NOT READ)
DK

63. Did they tell you what danger signals about your operation to watch for after you went home?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

64. Did they tell you when you could resume your usual activities, such as when to go back to work?

(INTERVIEWER: IF R SAYS "I don't work, I'm retired", CLARIFY: "Did they tell you when you could resume your usual activities, SUCH AS when to go back to work or drive a car?")

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

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65. Did they tell you when to see a doctor for a follow-up visit?

1. YES
2. NO
3. EXPLAINED TO SPOUSE OR CAREGIVER (DO NOT READ)
DK

66.(1-2). (While you were in the hospital), about how many minutes, if any, did

1. "a doctor "
2. "a nurse "

spend telling you how to take care of yourself (after you left the hospital)?

(IF DK, PROBE: What's your best estimate?)

(IF R ASKS IF THIS INCLUDES ANY TIME DURING THE HOSPITAL STAY, CLARIFY: "This includes any time during your hospital stay.")

(IF R SAYS "NO TIME" - ENTER "0000 MI")
(IF R SAYS "MORE THAN ONE" ASK R FOR A COMBINED TOTAL)

____ # OF MINUTES
DK

67. Did the doctors and nurses give you all the information you needed to help yourself recover?

1. YES
2. NO
DK

IF Q30=4 OR Q31=3 THEN GO TO Q69

68. Did the doctors and nurses give your family (or someone close to you) all the information they needed to help you recover?

(IF R DID NOT WANT ANYONE ELSE TO BE GIVEN INFORMATION, ENTER "4")

1. YES
2. NO
3. NO FAMILY/NO ADULT FAMILY/NO BIRTHING PARTNER (DO NOT READ)
4. NO VISITS/NEVER WANTED OR NEEDED INFORMATION (DO NOT READ)
DK

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69. While you were in the hospital, how worried were you about how you would pay your hospital bill -- very worried, somewhat, not very, or not at all worried?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. VERY
2. SOMEWHAT
3. NOT VERY
4. NOT AT ALL --> Q71

DK

70. Did you get as much help as you wanted from someone on the hospital staff in figuring out how to pay your hospital bill?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. YES
2. NO
3. NO ONE HELPED (DO NOT READ)
4. R DIDN'T WANT/NEED ANY HELP (DO NOT READ)

DK

71. Did anyone tell you (either BEFORE you went into the hospital or) DURING your hospitalization how much of your hospital bill you would have to pay on your own?

(IWER: IF R IS UPSET AT DISCUSSING THEIR ABILITY TO PAY, CLARIFY: "We are only asking so we can find out how well the hospital did its job."

1. YES
2. NO

DK

72. Did you have any questions about your bill, either while you were in the hospital or after you were discharged?

1. YES
2. NO ----------> INTRO.Q74
3. R DID NOT GET BILL YET (DO NOT READ) --> INTRO.Q74

DK ----------> INTRO.Q74

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73. Did you get as much help as you wanted (from someone on the hospital staff with these questions)?

1. YES
2. NO
3. DIDN'T GET/WANT HELP (DO NOT READ)
DK

INTRO.Q74

INTRO.Q74. Please rate the following aspects of your care as either excellent, very good, good, fair, or poor. First...

(PRESS ANY KEY TO CONTINUE)

ROTATE Q74.1,Q74.3,Q74.4,Q74.5

(ROTATE Q74.1 AND Q74.2 TOGETHER)

74.(1-5) (How would you rate/How about)

1. "the courtesy and helpfulness of your doctors?"
2. "the courtesy and helpfulness of your nurses?"
3. "the availability of nurses?"
4. "the availability of doctors?"
5. "how well the doctors and nurses worked together?"

(READ LIST IF NEEDED)

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR
DK

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75. OVERALL, how would you RATE the care you received at the hospital -- was it excellent, very good, good, fair, or poor?

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR
DK

76. Would you recommend this hospital to your friends and family if they needed to be hospitalized?

1. YES ----------> Q78
2. NO
3. IT DEPENDS (DO NOT READ)
9. REFUSED ----------> Q78
DK

77. [If you were to recommend AGAINST going to this hospital, what would be your MOST important reason for doing so?/What is the MOST important reason you would not recommend the hospital?]

(DO NOT READ LIST) (ACCEPT MULTIPLE MENTIONS)

(DO *NOT* PROBE)

01. THEIR DOCTOR DOES NOT PRACTICE THERE
02. LOCATION
03. QUALITY OF MEDICAL CARE/POOR OUTCOME
04. UNFRIENDLY STAFF/INCONSIDERATE/UNPLEASANT/MEAN
05. BAD NURSES
06. BAD REPUTATION
07. CLEANLINESS OF FACILITY
08. COST/TOO EXPENSIVE
09. DON'T KNOW STAFF
10. OTHER (SPECIFY): _____
DK

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78. At this stage in your recovery, would you say your health is excellent, very good, good, fair, or poor?

(IF R SAYS, "IT VARIES", REPEAT QUESTION)

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR
6. TERMINAL (DO NOT READ) --> Q81

DK

79. And IN GENERAL, would you say your health is excellent, very good, good, fair, or poor?

(IF R SAYS, "IT VARIES," PROBE: "Well, IN GENERAL, would you say your health is excellent, very good, good, fair, or poor?")

1. EXCELLENT
2. VERY GOOD
3. GOOD
4. FAIR
5. POOR

DK

80. Overall, is your health now BETTER than you expected, WORSE than you expected, or ABOUT WHAT you expected?

1. BETTER THAN EXPECTED
2. WORSE THAN EXPECTED
3. ABOUT WHAT EXPECTED

DK

81. During the past TWO weeks, how many days did illness or injury keep you in bed all or most of the day?

_____ DAYS

DK

INTRO.Q82

INTRO.Q82. For each of the following statements please tell me whether you agree or disagree. Here's the first statement.

(PRESS ANY KEY TO CONTINUE)

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ROTATE Q82.1,Q82.2,Q82.3

82.(1-3) (How about)

1. "A person should go along with their doctor's advice even if they think it's wrong."
2. "A hospitalized patient should not make decisions about his or her own medical care."
3. "Even if medical news is bad, a patient should be told about it."

(Do you agree or disagree?)
(PROBE: Would that be STRONGLY or SOMEWHAT?)

1. STRONGLY AGREE
2. SOMEWHAT AGREE
3. SOMEWHAT DISAGREE
4. STRONGLY DISAGREE

DK

83. Lastly, we need to ask a few questions to classify your answers. What year were you born?

____ YEAR
9996 = R WAS BORN AFTER 1975
9999. REFUSED
DK

84. What was the last year of school you completed?

(READ LIST ONLY IF NECESSARY)

1. LESS THAN HIGH SCHOOL (0-11 YEARS)
2. HIGH SCHOOL GRADUATE OR GED (12 YEARS)
3. SOME COLLEGE/TRADE OR TECHNICAL SCHOOL (13-15 YEARS)
4. COLLEGE GRADUATE (16 YEARS)
5. POST GRADUATE (17 OR MORE YEARS)
9. REFUSED

DK

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85. Are you married, separated, divorced, widowed or never married?

1. MARRIED ----------> CK.Q87
2. LIVING AS IF MARRIED (DO NOT READ) --> CK.Q87
3. SEPARATED
4. DIVORCED
5. WIDOWED
6. NEVER MARRIED
9. REFUSED
DK

Q86 DROPPED STARTING IN 1993

CK.Q87

87. Is your MAIN health insurance Medicare, [Medicaid/MediCAL/Access] , something else, or do you have no insurance?

1. MEDICARE
2. [Medicaid/MediCAL/Access]
3. SOMETHING ELSE
4. NO INSURANCE ----------> Q89
5. MEDICARE / [Medicaid/MediCAL/Access] (NOT SURE WHICH) (DO NOT READ)
9. REFUSED ----------> Q89
DK ----------> Q89

88. Are you in an HMO (Health Maintenance Organization)?

1. YES
2. NO
DK

89. Are you of Hispanic origin or descent?

(IF R DOESN'T UNDERSTAND, CLARIFY: "By Hispanic I mean of Mexican, Cuban, Puerto Rican, or some other Spanish background.")

1. YES ------> Q91
2. NO
9. REFUSED
DK

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90. And are you white, black, Asian, or something else?

1. WHITE
2. BLACK
3. ASIAN
4. SOMETHING ELSE (DO NOT SPECIFY)
9. REFUSED
DK

91. And last, was your total 1992 household income before taxes MORE or LESS than $25,000?

(IF DK, PROBE "WHAT WOULD BE YOUR BEST ESTIMATE?")

1. MORE
2. LESS ----------> Q93
3. EXACTLY $25,000 (DO NOT READ) --> CK.Q94
9. REFUSED ----------> CK.Q94
DK ----------> CK.Q94

92. Was that between 25 and 35, between 35 and 50, or more than $50,000?

1. 25,001 TO $35,000 --> CK.Q94
2. 35,001 TO $50,000 --> CK.Q94
3. MORE THAN $50,000 --> CK.Q94
9. REFUSED ----------> CK.Q94
DK ----------> CK.Q94

93. Was that less than 7500 ("75-hundred"), between 7500 and 15,000, or more than $15,000?

1. LESS THAN $7500
2. 7500 TO $15,000
3. MORE THAN $15,000
9. REFUSED
DK

94. INTERVIEWER: PLEASE ENTER GENDER OF RESPONDENT

1. MALE
2. FEMALE

THANKS

That's our last question. The Picker/Commonwealth Program for Patient-Centered Care appreciates your help in this important effort. Have a good (day/afternoon/evening).

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